

Disproportionality, Response to Intervention, and
Special Education Directors' Characteristics

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ABSTRACT

The topic of this dissertation was the factors that contribute to disproportionate representation of minority students in special education programs. The problem that motivated this study was that achievement gaps, high drop-out rates, low graduation rates, discipline occurrences, and low student retention rates plague students who are served in special education, and that African American students are disproportionately placed in special education programs. However, the reasons for the disproportionate representation of minority students in special education programs are unclear. Therefore, the purpose of this study was to examine special education directors' leadership role characteristics such as (a) tenure as special education program director, (b) gender, (c) years of experience in education, (d) race or ethnicity, and (e) level of implementation of response-to-intervention (RTI) to determine how those factors impact district disproportionality for minority students in Georgia. A total of 155 of the 180 district-level Special Education Directors in the State of Georgia participated in this study. The results showed that the demographic and background characteristics of the Special Education Directors and the level of RTI were not related to disproportionality. Based on these results, it was recommended that future researchers should replicate this study in other geographic areas, should develop more comprehensive models of disproportionality, and should perform qualitative studies to develop a more comprehensive view of disproportionality.

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DEDICATION

I would like to dedicate this dissertation to my family and friends who supported me through this journey and encouraged me to stay the course. I am grateful to each of you. I would also like to dedicate this accomplishment to a few special people who have consistently been a positive influence on my life and my career.

To my parents: Thank you for all your love and support throughout my life. Through all my years, you have been right there by my side. God truly blessed me when he chose you as my parents. You taught me perseverance and that failure was never an option.

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Finally, I give all the glory and honor to God because without him, none of my success would have been possible. I can do all things through Christ which strengthened me (Philippians 4:13).

Chapter I

INTRODUCTION

Disproportionality is “the representation of a particular group of students at a rate different than that found in the general population” (Gravois & Rosenfield, 2006, p. 42). The process and placement of students in special education at disproportionate rates has been a long standing and complex issue, most especially for minority students. Not only minority students but students from socioeconomically disadvantaged backgrounds have historically been overrepresented in special education programs (Dunn, 1968). As a result of the systemic problem of over-representation, litigation and legislation began to spawn action for change.

For decades there has been much research in education to corroborate the disproportionate representation of minority students in special education (Arnold & Lassman, 2003; Coutinho, Oswald, & Best, 2002; Delgado & Scott, 2006; Salend & Garrick-Duhaney, 2005; Simmins, Feggins-Azziz, & Chung, 2005; Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). In the words of Ritter and Skiba (2006), “Disproportionality exists when a specific group is over or under represented in a specific category or area” (p. 1). However, even though mandates and safeguards are in

place, such as the Individuals with Disabilities Education Act (IDEA), a significant percentage of minorities receiving special education services is still not experiencing academic success.

The topic of this dissertation was the factors that contribute to disproportionate representation of minority students in special education programs. Federal legislation in the United States, such as the 1975 Education of All Handicapped Children's Act (P.L. 94-142) and the subsequent reauthorizations and extensions in 1990, 1997, and 2004, has increased the level of accountability of educators regarding how they educate students in need of special education services, and this includes how students are determined to be in need or eligible for such services (Skiba et al., 2008). Despite the fact that federal regulations such as those contained in the IDEA were developed to ensure equitable treatment for minority students, a higher percentage of minority students are enrolled in special education programs than is the case for White students (Skiba et al., 2008). In fact, Black students are more than twice as likely to be classified as a student in need of special education services than their White peers nationally, whereas Native American students are nearly twice as likely to be classified as Specific Learning Disability (SLD) and 60% more likely to be identified as cognitive impaired (Sullivan & Bal, 2013). Furthermore, the identification rate of students placed in special education programs has progressively increased since the establishment of special education services in 1975 (Robelson, 2005). This is especially true of minority students. In the state of Georgia

during the 2011-2012 school year, approximately 11% of students in Georgia were served in special education, with Black students being served as intellectually disabled at a rate two times that of White students (Georgia Profile Report, 2011).

Many authors have criticized the process and procedures involved in determining special educational placement. For example, according to Blanchett (2009) the standards used to assign learners to special classes in the United States are inappropriate. Blanchett noted that both African Americans and Hispanics are assigned to special education programs at rates far higher than their White counterparts. At the same time, African Americans and Hispanics are significantly under-represented in academically gifted programs. These differences could be explained by socio-economic or other differences between White and minority students, but other factors such as biases in the process and procedures could be involved (Blanchett, 2009).

Beyond student-specific characteristics that result in placement in special education programs, a variety of other factors are predictive of disproportionate representation such as eligibility requirements as well as program features and procedures (Artiles et al., 2010; Coutinho & Oswald, 2000; Skiba et al., 2008). According to Redfield and Kraft (2012), special education services designed to assist students with special needs are not as effective when students receive services not because they are intellectually disabled, learning disabled, or emotionally/behaviorally disabled but due to race, pre-determined teacher expectations, cultural differences, or test bias.

Although school leadership has been linked to student outcomes (Fullan, 2001; Kouze & Posner, 2007; Taylor & Tashakkori, 1994), this literature has typically examined principal and superintendent leadership roles. However, the directors of special education programs within a school district are the leaders that may have the most influence on enrollment in special education programs. Consequently, research questions were developed for the current study related to the demographic and background characteristics of special education program directors including tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of Response to Intervention (RTI). The State of Georgia served as the geographic location for the current study. Data at the district level regarding disproportionate representation of minority students in special education (referred to as the weighted risk ratio or relative risk) were examined in relation to the demographic and background characteristics of the districts' special education directors.

Although special education programs are valuable and can be of immense help for many students, there are also negative consequences to being placed in special education programs. Consequently, there are a variety of reasons to attempt to ensure that students are not placed into special education programs. Due to the fact that special education programs focus more on emotions and behaviors than on academic development (Brown, 2010), children who are placed in special education programs may lack the opportunity to manifest their true academic potential. These students may not be able to demonstrate

their capabilities as their non-disabled peers. Teachers often have low expectations of these children which can further hinder their academic progress (Brown, 2010). Children in special classes may also develop a sense of inferiority and may not exploit their potentials to maximum (Brown, 2010; Moore, 2002). Finally, students who are identified as needing special education programs end up dropping out of school at a higher rate than other students; this may be due to a lower level of ability but may also be as a result of being relegated to the special education program (Losen & Wellner, 2001). Even those special education students who persevere and graduate are often considered to have received an inadequate education and end up in jobs requiring low skills and receiving low pay (Losen & Wellner, 2001). The scars associated with being in a special education program can last a lifetime (Moore, 2002). According to Blanchett (2009), the difficulties experienced by African American students due to their placement in special education programs are more profound than the difficulties experienced by comparable White students.

Blanchett (2009) and others have concluded that the disproportionality of African American students in special education is mainly caused by racism. In fact, culturally and linguistically diverse students are twice as vulnerable to discrimination: first by race and again by disability (CCBD, 2013). The result of being placed in special education due, at least in part, to one's race has caused African Americans to be denied a vital opportunity in education (Powers, Hagan-Murillo, & Restori, 2004). Authors have

pointed to the complexity of the problem of disproportionality for African American students in special education programs (Artiles et al., 2010), but some researchers have focused on leadership as a prominent factor in systems that perpetuate bias (Kouze & Posner, 2007), and this was the focus of the current study.

In this chapter, the topic for the current study was introduced. After a statement of the specific problem is addressed, the purpose of the study is described. The purpose of the study led to the development of six specific research questions which are presented in the subsequent section. The significance of the study and the conceptual framework are described in the next sections, and the chapter ends with definitions of key terms.

Statement of the Problem

Achievement gaps, high drop-out rates, low graduation rates, discipline occurrences, and low student retention rates plague students who are served in special education. This is especially true for minority students. Moreover, many teachers do not have the same expectancies for all students. Teachers often develop certain predictions and expectations based on factors such as gender, race, name, and socioeconomic status and designate labels based on these characteristics. Researchers suggest that teacher expectations can predict student achievement and behavior (Redfield & Kraft, 2012). Although the IDEA exists, many states continue to over-identify and place minority students in special education programs (Skiba et al., 2008).

Although researchers have begun to measure and better understand the challenges of disproportionality, there was still much to be done to address the inequity in public schools. The characteristics of leaders have been linked to student outcomes (Fullan, 2001; Kouze & Posner, 2007; Taylor & Tashakkori, 1994), but there was a gap in the literature in that this approach had not been used in the study of disproportionality in special education meaning. More quantitative and qualitative research must be done to further analyze disproportionality issues and patterns in an effort to offer better opportunities for all students, and an examination of the role of the characteristics of special education directors (such as gender, tenure, experience, and race or ethnicity) was one area that requires study.

Purpose of the Study

The purpose of this study was to examine Special Education directors' leadership role characteristics such as tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI to determine how those factors impact district disproportionality for minority students in Georgia. Leaders' characteristics are associated with student outcomes in a variety of contexts (Fullan, 2001; Kouze & Posner, 2007; Taylor & Tashakkori, 1994). However, there was a gap in the literature in that this approach had not been used in the study of disproportionality in special education meaning.

Districts that are found to be over identifying minority students for special education or determined to have significant discrepancies with race with regard to discipline are required to participate in a state mandated self-monitoring process. This process includes activities such as a review of the district's policies, practices, and procedures; child find procedures; evaluation procedures; eligibility determination; and, discipline procedures. The districts must maintain documentation of their self-assessment for at least 5 years (Georgia Department of Education, 2013). If the district is found to have non-compliance policies, practices, and procedures, the district may be required to verify data, complete a records review, complete a focused monitoring, or complete a corrective action plan (CAP). Further sanctions could lead to an impact on federal funds (Georgia Department of Education, 2012). These activities are led and monitored by the special education director in each system. Therefore, it is certainly plausible to determine if the special education director's tenure and experience has an impact on the implementation, monitoring, and completion of these state mandated requirements.

In this study, I examined the statistical relationship between tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI and two measures of disproportionality: disproportionality in the identification of students in special education and disproportionality among special education students who were suspended or expelled.

Data for the 2012-2013 school year were used. With this study, I contributed to the literature previously published related to the topics of disproportionality, leadership sustainability, and gender studies as related to leadership.

Research Questions

The research questions for this study were developed based on the purpose stated above, to examine special education directors' leadership role characteristics such as (a) tenure as special education program director, (b) gender, (c) years of experience in education, (d) race or ethnicity, and (e) level of implementation of RTI to determine how those factors impact district disproportionality for minority students in Georgia. There were five independent variables (tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI) and two dependent variables. The two dependent variables were the disproportionate representation of African Americans in special education as measured by the weighted risk ratio, termed the identification weighted risk ratio, and disproportionate representation of African Americans in special education among students who were suspended or expelled as measured by the weighted risk ratio, termed the disciplinary weighted risk ratio. The independent variables were a mixture of continuous variables (tenure, experience level, and implementation of RTI) and categorical variables (gender and race or ethnicity). The data were analyzed using multiple regression and Analysis of Variance (ANOVA) frameworks. In addition to the two main research questions, two

additional research questions were developed to examine possible interactions between the level of implementation of RTI and tenure as a special education director. Finally, two research questions were developed to examine possible interactions between the level of implementation of RTI and years of educational experience. The six research questions were:

1. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the identification weighted risk ratio?

2. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school districts' implementation of RTI significant predictors of the disciplinary weighted risk ratio?

3. Is there a significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio?

4. Is there a significant difference between levels of RTI and levels of a director's tenure on the disciplinary weighted risk ratio?

5. Is there a significant difference between levels of RTI and levels of a director's experience on the identification weighted risk ratio?

6. Is there a significant difference between levels of RTI and levels of a director's experience on the disciplinary weighted risk ratio?

Research Methodology

A quantitative, nonexperimental research design was used in this study (Vogt, 2006). A nonexperimental research design was deemed most appropriate for this study because the independent variables of interest in this study were preexisting characteristics of the participants rather than variables that could have been experimentally manipulated (Vogt, 2006). The independent variables were tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI which was measured using a brief survey. The dependent variables in this study were the disproportionate representation of African Americans in special education as measured by the weighted risk ratio and the disproportionate representation of African Americans in special education among students who were suspended or expelled as measured by the weighted risk ratio. The first dependent variable weighted risk ratio was computed based on the percentage of minority students in special education compared to the percentage of White students in special education. The second dependent variable weighted risk ratio was computed as the percentage of minority students in special education among students who were suspended or expelled compared to the percentage of White students in special education who were suspended or expelled. The target population was the 180 special education program directors in the

State of Georgia. The participants consented to participate, completed the brief online survey, and had been employed as the special education directors in their district for at least 1 year.

Permission to conduct this study was obtained from the Institutional Review Board of Valdosta State University (see Appendix B), and this study was given approval by the Georgia Director of Special Education. Data were analyzed with the Statistical Package for the Social Sciences (SPSS) computer program (version 20.0). Both descriptive and inferential statistical analyses were performed. After an examination of the statistical assumptions, the main analysis consisted of a multiple regression analysis to examine the combined effects of tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI on the weighted risk ratios, as well as ANOVAs used to examine interaction effects.

Significance of the Study

Despite the fact that federal regulations exist to ensure equitable treatment for minority students, minority students are over-represented in special education programs (Skiba et al., 2008). The over-representation appears to be increasing (Artiles et al., 2010; Robelson, 2005; Skiba et al., 2008). Students' needs and abilities are determinants of whether or not they are relegated to a special education program, but other factors come into play as well that have nothing to do with the individual child's needs (Artiles

et al., 2010; Blanchett, 2009; Continho & Oswald, 2000; Redfield & Kraft, 2012; Skiba et al., 2008).

In addition to the positive outcomes, there are a variety of negative consequences associated with placement in special education. The negative consequences include a lack of opportunity to manifest their true academic potential (Brown, 2010), the development of a sense of inferiority (Brown, 2010, Moore, 2002), higher dropout rates (Losen & Wellner, 2001), and others (Losen & Wellner, 2001; Moore, 2002). Despite the fact that policies and procedures are in place to get students in need of special education services the help they need while not placing students in special education programs who could thrive in regular education, researchers have concluded that many students are inappropriately placed in special education programs and that this is more likely to happen to minority students than White students (Artiles et al., 2010; Blanchett, 2009; Redfield & Kraft, 2012).

Although school leadership has been linked to student outcomes (Fullan, 2001; Kouze & Posner, 2007; Taylor & Tashakkori, 1994), very few studies had been conducted to examine how leadership factors may play a role in the level of disproportionality at the school-district level. Furthermore, even those few studies that had been conducted focused on principal leadership (Branch, Hanushek, & Rivkin, 2013; Gerstner & Day, 1997; Zeinabadi, 2014). However, the special education director of a school district may have influence on the special education policies and procedures

greater than those of principals. One way in which differences between special education directors could manifest themselves would be through their demographic and background characteristics, and the current study examined tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI in order to fill this gap in the literature.

This study was important because of the negative consequences of being assigned to a special education program based not on needs and abilities but based on programmatic factors and factors related to systematic bias in the system. These negative consequences include lower academic achievement, a sense of inferiority, high dropout rates, and others (Brown, 2010; Losen & Wellner, 2001; Moore, 2002). The current study was significant because it shed light on one possible influence on the disproportionate representation of minorities in special education programs. This information could be used to improve the delivery of special education services and reduce this disproportionality.

Theoretical Basis of the Study

The theoretical framework for the development of the current study was structural inequity theory (Sullivan & Artiles, 2011). According to this theory, disproportionality in the representation of various ethnic and racial groups in the special education system can be understood as a manifestation of racial inequity in social systems rather than as a function of racist beliefs (Conyers, 2002). In structural inequity theory an

institutionalized pattern of inequality in distribution of resources in society rather than racism or the beliefs of individuals, are viewed as responsible for differences between races in terms of education, income, employment, and other outcomes (Sullivan & Artiles, 2011).

If structural inequity theory is sufficient to explain minority disproportionality in special education programs, then there should be no relationships between special education directors' tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI on the one hand, and district disproportionality (measured two ways) for minority students on the other hand. If, alternatively, the results from this study indicate that there are relationships between one or more of the special education directors' background and demographic characteristics and minority disproportionality in special education, this would indicate that structural inequity theory is either not viable as a theory upon which to base an understanding of this disproportionality, requires revision, or is incomplete. In summary, by examining the potential relationships between special education teachers' demographic and background factors and disproportional representation of minority students in special education, structural inequity theory was tested to determine if it is sufficient to explain minority disproportionality or whether it is insufficient and in need of revision.

Limitations of the Study

One limitation of this study was that some special education directors have not been in their current position for long enough to have an influence on the disproportionate representation of minority students in special education programs. Therefore, their demographic and background characteristics would not have been related to the weighted risk ratio because not enough time had passed with them in their position. To account for the fact that the characteristics of special education directors who are very new to their position would not have had time to affect disproportionality, data were excluded from districts where the special education directors indicated that they have been in that role for less than 1 year. Another limitation of this study was that there were other demographic and background characteristics as well as other variables associated with specific policies that are not included in this study. Based on the results from the current study and other studies in this area, future researchers could attempt to build a more comprehensive model of all the factors that influence disproportionality.

A delimitation of this study was that only special education directors from Georgia participated. It may be the case that there are differences between special education directors in Georgia and special education directors in other areas in terms of the processes and procedures associated with determinations of special education eligibility. Thus, future researchers may wish to replicate the results from the current

study in other states in order to evaluate the generalizability of the findings from this study.

Definition of Terms

The following definitions and abbreviations are provided to clarify the technical vocabulary utilized within the paper.

Disproportionate Representation. When the percentage of students of a particular race is either overrepresented or underrepresented in special education as compared to the school's population. The Georgia Department of Education (GADOE) defines significant disproportionality as having an N size of 10 or greater and a weighted risk ratio of ≥ 3.0 for the identification, placement, and/or discipline of students with disabilities (GADOE, 2011d).

Free Appropriate Public Education (FAPE). The special education and related services that make up the FAPE are provided at no cost to the parent to children identified with disabilities who have an Individualized Education Plan (IEP). Special education and related services, including special education at the preschool, elementary, and secondary levels, are services that are provided so eligible students can make progress toward and/or meet the educational standards of Georgia. All students will be provided an education that includes access to the Georgia curriculum and addresses the unique needs of the individual student and his or her disability (GADOE, 2011d).

According to the GADOE(2011d):

While the education provided to the student with an IEP must be appropriate and must address what the individual student needs in order to make educational progress, this is neither a guarantee of achievement of each goal on the IEP nor a guarantee of promotion, passing grades, or graduation. Likewise, passing from grade-to-grade or receiving all passing grades does not mean that a student is receiving FAPE. Each student is an individual and his or her appropriate education is determined on a case-by-case basis. In addition, the term “appropriate” is not the same as “best;” “appropriate” is a minimal standard that assures the student has the opportunity to make educational progress.

Individuals with Disabilities Education Act (IDEA). The nation’s federal special education law that ensures public schools serve the educational needs of students with disabilities. IDEA requires that schools provide special education services to eligible students as outlined in a student’s IEP. IDEA also provides very specific requirements to guarantee a FAPE for students with disabilities in the least restrictive environment (LRE). FAPE and LRE are the protected rights of every eligible child, in all fifty states and U.S. Territories. IDEA requires every state to issue regulations that guide the implementation of the federal law within the state. At a minimum, state regulations must provide all of the protections contained in the IDEA. (National Center for Learning Disabilities, 2011).

Individualized Education Program (IEP). A formal contract outlining the services and support the school will provide in order for the child to benefit from the educational program. An IEP must be developed before a student can begin receiving special education services, and it must be reviewed and updated each year. This annual review is required for as long as the student remains eligible for special education services. According to the GADOE (2011d), although each state differs in how it develops an IEP, the IDEA requires that every IEP include the following:

1. How the student is currently performing in school;
2. How the student can achieve educational goals in the coming year; and,
3. How the student will participate in the general education curriculum.

Pyramid of Interventions (POI) – a conceptual framework that enables all students to continue to show growth in school. The pyramid is a scaffolding representation that illustrates layers of instructional efforts provided to students according to their needs (GADOE, 2011c).

Research Based Intervention- one where all elements of the curriculum are developed using the collective research and scientific community (Harn, 2007).

Response to Intervention (RTI). A practice of academic and behavioral interventions that provide early and effective assistance to struggling students. Research-based interventions are implemented and progress is monitored frequently to determine

student progress or lack thereof. When students do not demonstrate progress, more intense interventions are introduced (GADOE, 2011c).

Special Education. According to Turnbull, Turnbull, Wehmeyer, and Shogren (2013), special education is specifically, individualized planned instruction, at no cost to a child's parents, that meets a child's distinctive needs in school.

Weighted Risk Ratio. A measure of the disproportionate representation of minority students in special education (the identification weighted risk ratio) or in suspensions or expulsions (the disciplinary weighted risk ratio). The weighted risk ratio is computed as the proportion of minority students meeting the condition (i.e., being in special education for the identification weighted risk ratio or being suspended or expelled in the disciplinary weighted risk ratio) divided by the proportion of White students meeting the same condition (GADOE, 2011d).

Organization of the Study

This chapter contained an introduction to this study. The problem addressed, the disproportionate representation of minority students in special education programs, and the negative consequences associated with this trend, were discussed. The specific purpose of this study was described which led to the development of six specific research questions. The research questions were developed in order to evaluate the individual effects of special education directors' tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of

implementation of RTI on disproportionality on a district-by-district basis in the State of Georgia.

Chapter 2 contains a review of the literature relevant to this study including a brief history of special education and a review of Federal regulations related to special education. Issues directly related to leadership and disproportionality are also addressed in Chapter 2. Chapter 3 contains a discussion of the research method and procedures used to achieve the purpose of this study. The results are described in Chapter 4 while Chapter 5 contains a discussion of the results including their implications and recommendations for both educational practice and future research in this area.

Chapter II

REVIEW OF RELATED LITERATURE

Gravois and Rosenfield (2006) defined disproportionality as “the representation of a particular group of students at a rate different than that found in the general population” (p. 42). The process and placement of students in special education at disproportionate rates has been a long standing and complex issue, especially for minority students. According to Dunn (1968), an estimated 60% to 80% of the students who were classified as being eligible for special education services were from socioeconomically disadvantaged backgrounds. As a result of the systemic problem of over-representation, litigation and legislation began to spawn action for change.

Historical Perspective of Special Education

According to Winzer (2006), every society has ranges of behaviors that it considers as appropriate in guiding its character. However, not all humans can behave the same way due to the difference in personality, culture, religion, and other factors. Individuals who have different codes of conduct are regarded as exceptional and deviant (Winzer, 2006). These codes of conduct are formulated within the society, are not constant, and they change with generations. These differences are manifested in all

aspects of development such as cognitive and affective areas. In early years of life, school age children are perceived differently due to these set standards in life. The educational system is designed to provide special attention to the exceptional so that they may develop as their counterparts.

As Winzer (2006) suggested, provision of special education was started by the European society to provide special attention to disadvantaged learners in the middle of the eighteenth century. The European society revolutionized special teaching methods that could be used to teach the physically challenged, deaf, and mentally retarded (the term used at the time) children (Winzer, 2006). Approaches in teaching methods were designed to ensure that those learners learn at their pace, and the teacher attends to each learner on a personal level. Many pioneers began to support this notion in education especially from France, which is believed to have played a significant role in special education.

For example, French initiatives played a significant role in improving education for the blind, mentally challenged and the deaf following de l'Épée's innovations (Artiles & Bal, 2008). He led missions to improve education for the mentally retarded and spread the doctrine of supporting them. His effort yielded benefits abundantly such as developing educational philosophies by French scholars like John Locke who contributed to deaf education. The initiative later spread and was embraced in Canada, North America, and other European nations (Winzer, 2004).

Although special education started in Europe, the British government was less reluctant to embrace it, as supported by Winzer (2006). This was due to political views by top government officials who were not ready to embrace any idea from France. Even though the British government deployed other schemes in catering for the needs of the elderly and disadvantaged children, the French system was superb. This led the social system of education in Britain to adopt the initiative despite little support from the government (Winzer, 2006).

The United States was enlightened to adopt the initiative by sympathy for improving the lives of the challenged in the nineteenth century. Educational philosophies and evangelical teachings propelled the adoption of the initiative. The adoption of the initiative coincided with a time when the U.S. was instituting the society to ensure protection rights of a child. Therefore, special education was meant to reform retarded children to be able to adapt to the changes in their society. Pioneers of special education and clergies in the U.S. were driven towards ensuring that challenged children were treated in a humane manner and protected from discrimination (Artiles & Bal, 2008).

At the end of the nineteenth century, special classes had increased in major cities of the world where the mentally challenged children received their education. The children in these classes had to be evaluated by psychiatrists to qualify for an opportunity to get in these schools. The classes propelled other fields of study to emerge to be able to assess the quantity and quality deviant of normal and abnormal children. Psychology and

medical fields were trusted to identify measures necessary to identify the mentally challenged children. This made these fields make great steps in innovations in intellectual development. Measures like the intelligence quotient (IQ) measure were created. However, children identified as mentally challenged had to comply with the social and psychological expectations of the time (Artiles & Bal, 2008).

Special education gained momentum due to discrimination of exceptional children in society. Exceptional children were denied enrolment in normal schools and many times were not educated at all. This made the U.S. Congress, legislature, and the courts see the need of well-defined rights of children with disabilities. Between 1965 and 1975, the U.S. reassured to fund and support special education through passing laws to support the disabled children (Winzer, 2006).

In 1975, the Education of All Handicapped Children's Act (P.L. 94-142), was passed. This was the first major piece of legislation that specifically addressed inequity issues and special education. This law required that all children must have a comprehensive evaluation to be considered for special education services and supports. The law had a great impact on public education and children with disabilities. The passage of this law demanded public schools to act as follows:

1. Child Find requirements-schools were required to locate and identify children with disabilities and initiate the referral process to determine eligibility for services.

2. All students with disabilities were to be provided a free, appropriate public education (FAPE). If eligible, students were required to have an Individual Education Plan (IEP) that outlined services and supports.
3. Due process rights were offered to children with disabilities and their parents, including the right of consent prior to actions affecting their child, the right of notice, and the right to an impartial due process hearing to resolve any grievances and disputes between parents and the school (Smith, 2005, p. 316).

The FAPE provision and the implication of equal access to an education gave hope to equal access and opportunities for all children.

The Education for All Handicapped Children Act was reauthorized in 1990, 1997, and 2004 and later became known as the Individuals with Disabilities Act (IDEA). Even so, the data still suggest a disproportionate representation of minority students, and racial inequity in special education is still an issue. Minority disparities in education have been documented for decades. Throughout the research, several threads and patterns have been attributed to the overrepresentation of minorities: test bias, poverty, special education process, inequity in general education, environmental factors, hereditary factors, cultural differences, and behavior management (Skiba et al., 2008).

According to Smith and Kozleski (2005) special education legislation was inspired by the struggles of the civil rights movement as well. Pertinent court challenges that began advocating against discriminatory practices in special education were *Larry P.*

v. Wilson Riles (1972, 1979, 1984, and 1986) and *Diana v. CABOE* (1970). These were two of the more well-known court cases that helped to bring inequity in education to the attention of legislators. The *Larry P. v. Wilson Riles California* class action suit concluded that many IQ tests were culturally biased and that over placement in classes for students who were mentally retarded deprived Black students of educational opportunity (Tonika, Angela, Cook-Morales, & Robinson-Zanartu, 2005). The *Diana* case challenged the over-representation of minorities in special education as well. However, this case focused more on Latino students and language proficiency. Latino students who were proficient in their native language were disproportionately placed in special education programs due to language barriers (Artiles, Rueda, Salazar, & Higareda (2005). Although the inequity and disparities were consistently recorded in the courts and the research, the issue of over-representation of minorities in special education continues to be problematic (Skiba et al., 2008).

Disproportionality in Special Education

According to Winzer (2006) at the dawn of the nineteenth century, about 108 cities in the world had endorsed the French initiative and had special schools. The number of children in the schools was sparingly high. The main reason leading to the high enrollment of the children in the schools was due to inappropriate selection method. The majority of students found in these schools were from a poor backgrounds and immigrants from neighborhood countries. Ironically, these children were termed

‘mentally challenged’ in the language of the era and received special education in isolated classes.

Social indices used to measure students’ eligibility to enroll for special education were susceptible in providing misleading information. Behavioral and emotional indices became the standard measures of intelligence (Blanchett, 2009). The widely used indices in the United States were influenced by Darwin’s theory of evolution that uses behaviors to manifest intelligence as the principle foundation in the theory. However, this measure did not provide authentic information on intelligence since the indices targeted the behavioral domain while disregarding affective and cognitive domains.

However, the indices were used to measure intelligence as scientists of the day argued that behaviors were the best determinant in natural selection. Therefore, proper application of intelligence could lead people to make decisions for the progress of the nation. Educators joined the forum in using moral standards in measuring intelligence. Disproportionality in special education began with these philosophies. By 1930, there were more than 20,000 children identified as mentally retarded in America. Although the number of mentally retarded children surpassed others in special classes, there were other categories comprising of the deaf, blind and physically challenged.

According to Winzer (2006) special classes registered higher numbers of enrollment during the growth of scientific racism at the adjournment of the nineteenth century. Mentally retarded enrollments were higher than other sectors with the majority

of the students in these classes being African American. However, educators who taught these special classes argued that they apply their professional knowledge in recruiting those learners. They shielded their decision that the criteria used ensure that those learners receive special education that shapes them to fit in the society irrespective of their retarded minds or being handicapped.

According to Blanchett (2009), the standards used to assign learners to special classes in the United States are inappropriate. The number of African Americans in special education is very high in district schools despite their number being low. Moreover, children from an Hispanic origin seize the second rank in predominately White areas, just after African Americans. Although the number of African Americans in special schools and classes are higher, there is a significant under-representation in academically gifted schools. Moreover, the majority of the students who are in special schools and classes are from African American origin and economically disadvantaged backgrounds.

Although special education is meant to better prepare students to fit in society, it lacks a major aspect of academic prosperity. Special education mostly focuses on emotions and behaviors (Brown, 2010). Children from these schools lack an opportunity to manifest their true academic progress. Moreover, these students are limited to explore in academic fields and demonstrate their capabilities as normal children. Additionally, in

many cases, teachers have low expectations of these children. Finally, children in special classes develop a sense of inferiority and may not exploit their potentials to maximum.

Over identification in special education programs with minority and linguistic groups greatly compromises the mission, purpose and validity. Although meant for upgrading social life of these students, the low teacher expectations, and often segregation, undermines the program. In many cases, the students lack proper communication from some of their teachers; hence, end up receiving inadequate academic skills. Sadly, many students develop lifelong effects such as low self-esteem due to experience in special classes and lack of exposure to the grade-level curriculum. A majority of students identified as needing special education programs end up dropping out of school, joining a gang, and/or become part of the judicial system. Those who persevere are considered to have received an inadequate education and end up in jobs requiring low skills and receiving low pay (Losen & Wellner, 2001).

Placing African Americans and those from Hispanic origins in special district schools in American states can lead to lifelong scars. According to Moore (2002), these students can develop a sense of inferiority throughout their lives and are eligible for low-income jobs or are often not employed. Moreover, very few of these students enroll in post-secondary education, and in their later life have access to low diet foods that result in low life expectancy. Even though subjected to the same conditions, African Americans experience hardship in rising to higher levels of education unlike their White

counterparts (Blanchett, 2009). This implies that even though in the same special schools or classes, White students are likely to obtain a higher level of educational achievement although African Americans will not.

According to Blanchett (2009) disproportionality in education is mainly caused by racism in many districts in the country. Although IDEA outlines the criteria for selection of students to attend special schools, African Americans and people from Hispanic origins still dominate the schools in a White-dominated country. Despite the legal policies outlined by the government to safeguard the rights of children against discrimination, the history of African Americans deprivation still exists in this country. In many cases, disproportionality in special education has caused African Americans to be denied a vital opportunity in education (Powers et al., 2004). As a result, African Americans and Hispanics often have low quality, low paying jobs and poor living conditions.

According to Moore (2002) there is a critical lacking in teacher training programs that help to address behavior and emotions for special needs students. Moreover, teachers in schools for students who are mentally challenged do not have adequate skills to manage the students, and they have difficulties in managing student behavior. Prospective teachers' training programs must change and provide research-based pedagogy and methodology to prospective teachers in order to meet the specialized needs

of these children. Therefore, disproportionality needs to be addressed through an inter-dimensional approach to include specialized teacher training.

Skiba et al. (2008) found that the root of disproportionality goes all the way back to the 1950s and segregation. Moreover, this is especially true of over-representation of African American students identified as having a disability under the IDEA and receiving their services in a more restrictive placement. African American students are often found to be disproportionately identified in several categories of special education. However, the eligibility category of mental retardation is consistently the most significant category for disproportionality for African Americans. Mercer (1973) discovered that public schools identify minority students in need of special education services more than any other child service agency as part of the “6 hour retarded child” epidemic. This research indicates that the student is only perceived or viewed as “retarded” during time at school.

In a compilation of studies presented by Wilkerson (1934), many issues were brought to light that still remain as issues in addressing the achievement gap and the inequity in outcomes for minority students. Results from this study suggested that the inequality among the races varied among different school systems and between rural and urban schools within the same system. The findings indicated that the degree of the disparity depended largely upon the school system studied and that it could be assumed that some other variable, other than race, produced the difference.

In a study by Chinn and Hughes (1987), data were examined over a 10-year period; researchers found that African American students were unfailingly over-represented in special education. African American students were found to be over-represented in many categories in special education, but most significantly in mental retardation. With disproportionality continuing to be an issue in public schools, educators are constantly challenged to determine possible causes and correlations. Coutinho and Oswald (2000) advocated for changes in teacher preparation programs to respond to the issues surrounding disproportionality. Their research indicated that teachers who are better trained about cultural and ethnic differences may better respond to minority students' needs.

According to research analysis by Artiles, Kozleski, Trent, Osher, and Ortiz (2010), disproportionality is a multidimensional problem that must consider more than race alone. Their research led to the formulation of three claims:

1. Fragmented visions of culture permeate explanations of the problem;
2. The roles culture plays in learning are underspecified in disproportionality explanations;
3. The attention to culture in disproportionality explanations is discontinuous, ranging from simplistic to sophisticated perspectives. (p. 288)

These claims stress that educators must be aware of and understand cultural differences, among other factors in professional practices for effective teaching and learning.

Moreover, educators should examine their own beliefs or perceptions about culture and race in order to determine their own biases, if any, to better respond to all students' needs.

Research is, at best, significantly insufficient regarding how special education directors' personal and professional characteristics (e.g., tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI) impact or predict outcomes for students with disabilities on factors such as graduation, drop-out, and disproportionality. Therefore, it is important to investigate the various roles in education and their impact on student outcomes and teacher outcomes. Most of the research related to gender, tenure, experience, and race or ethnicity is investigated about teachers, principal, and superintendents' impact on student achievement. However, with the changing landscape in education, changing job responsibilities, and turnover in leadership, it is paramount that inquiry is made to understand how these factors impact educational outcomes on other leadership roles as well. In the words of Kouze and Posner (2007), "Leadership is everyone's business. No matter what your position is, you have to take responsibility for the quality of leadership your constituents get" (p. 337).

Ferguson and Ladd (1996) suggested that teacher test scores on the ACT showed positive results in reading improvements for students from third to fourth grade. Moreover, further analyses at a district level, controlling teacher experience and degree

level, showed improvement in reading and mathematics as well. Wayne and Youngs (2003) found that students made better academic achievement from teachers who performed well on tests such as the ACT and attended highly ranked colleges. However, teacher degree and certification were questionable with any academic gain except in high school mathematics where the rigor is more demanding, training more specialized, and the teacher's skill level proved to be a positive factor.

Concerns of Disproportionality. Special education services and supports are crucial for students who are clearly eligible for services. Many students who are served in special education can be successful with the development of an appropriate Individualized Education Plan (IEP). The IEP must address identified weaknesses and provide relevant goals and accommodations to remediate deficits. Ideally, this approach, without having to label children would be beneficial for all students for maximum student achievement. However, many times students who are determined eligible for special education services are not intellectually disabled, learning disabled, or emotionally/behaviorally disabled. Rather, other issues such as race, pre-determined teacher expectations, cultural differences, and test bias complicate valid identification (Redfield & Kraft, 2012).

Harry and Anderson (1994) suggested that minority students, more specifically black males, who are placed in special education, often inappropriately placed, have significant negative implications attached. Along with stigmatizing effects of a label and

placement, students' self-esteem and curriculum access are greatly impacted. Researchers have suggested that as students get to elementary school age, the achievement gap is greater and more difficult to close (Deninger, 2008). Moreover, the drop-out rate, graduation rate, and post-school opportunities are considerably diminished for minority students who have long-term separate educational placements and are served in separate classrooms. Also, students who are identified and placed in special education are many times placed in more restrictive school settings. Students who are served in more restrictive settings are often provided a less rigorous curriculum, taught at a slower pace, and held to minimal academic and social expectancies in comparison to their non-disabled peers. Sadly, data suggest that only 6% of teenaged African American students who are found eligible for special education ever return to general education. For students who are wrongly identified as needing special education services and supports, the curriculum and social inadequacies frequently lead to students getting further behind and having poorer outcomes (Harry & Anderson, 1994).

Response to Intervention and Disproportionality. The student's cognitive ability is measured even before the student shows any signs of need for more intense or specialized instruction. This is what makes RTI's link to disproportionality objective. It does not base its assessment on irrelevant social factors such as race. RTI sets out to identify cognitive abilities of each student regardless of his or her social orientation. The results gained from an RTI assessment, often referred to as universal screener, focus on

three major areas: outcome, individual, and data. Disproportionality in special education has been a ongoing problem due to the fact that other assessment programs did not focus on these factors. Because of this, disproportionality in special education was very subjective and, many times, over identification was a result (Chidsey & Steege, 2010).

RTI focuses on the outcome. This mode of intervention focuses on the outcome of an individual as the appropriate measure for the need for special education. Within the RTI model, instruction delivery is not aimed at stimulating a student's need for special education; rather it is focused on meeting the student's needs at its respective three tiers, or four tiers in Georgia's model. Disproportionality in special education often results from measuring the number of students from a specific group entitled for special education. This measurement would later lead to stereotypes that would be later used to naturally group students with similar or near similar traits into special education programs. This trait-biased designation explains why there are cases of under and over representation of different racial and ethnic groups in special education programs (Madyun & Hosp, 2013).

RTI is a tool that can help end or noticeably deal with the problem of disproportionality in special education programs (Hosp & Madyun, 2013). The focus on the different outcomes should reveal an achievement gap. Failure to register this will indicate that there is a problem in the methods of representation or representation of a specific group in the special education program. The discrepancy model, which fails to

focus on the outcome would only recognize the problem of disproportionality but would fail to recognize this as an erroneous misrepresentation of the cognitive ability of students from the specific group. According to Hosp and Madyun (2013), research has revealed that over representation of specific groups in a special program fails to record an achievement gap. This does not mean that these students have continual learning disabilities; it is actually a problem with placement discrepancies.

As Madyun and Hosp (2013) added, RTI also focuses on the student as an individual. At a broader perspective, this form of intervention focuses on the classroom and school together with the school district. This focus is enabled through the three-tiered nature of RTI (Figure 1). The three tiers are specifically structured with varying sets of instructions that reflect the needs of individual students as part of the classroom, school and district requirement. In RTI, the decision to render a student eligible for a special program is not based upon irrelevant social issues but on appropriate standards laid down by the school and school district at large (Madyun & Hosp, 2013, p. 63).

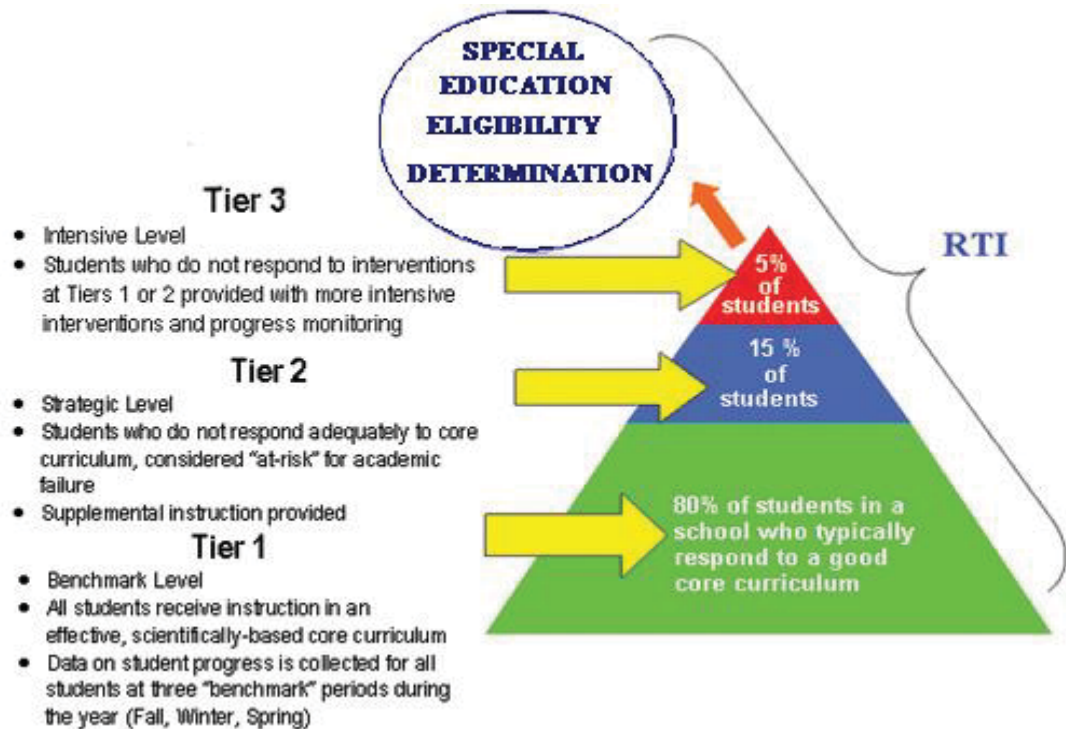


Figure 1. This model depicts the progression students follow in the three-tiered RTI process. Adapted from Lehigh University College of Education: Center for Promoting Research and Practice. What is RTI? Retrieved from <http://coe.lehigh.edu/content/what-rti> Copyright 2013 by Lehigh University. Reprinted with permission.

The varying intensity of the three tiers allows the intervention program to relate the outcome in each of the tiers with the cause (Madyun & Hosp, 2013). For example, a case of over representation of a specific racial group in the third tier will not lead to automatic eligibility to special education for this race. It will instead spark research into the instructions of the first and second tier. The objective of this research was to analyze the unmet specific needs of members of this racial group. Adjustments are then carried out to ensure that these needs are met. In such a case, RTI, is seen as not only a model

for determining a student’s cognitive ability but as a solution to the problem of disproportionality (Madyun & Hosp, 2013, p. 69). However, uniquely, Georgia has a four-tiered model (Figure 2). In Georgia, the added Tier 3 in the “Georgia Student Achievement Pyramid of Interventions” is unique due to the *Marshall vs. Georgia* case requiring all Georgia schools to have a Student Support Team (SST). According to the GADOE, the intent of the SST was to prevent premature or inappropriate referrals to Special Education and to carefully consider all non-special education options in Tiers 1 through 3 (2011d).

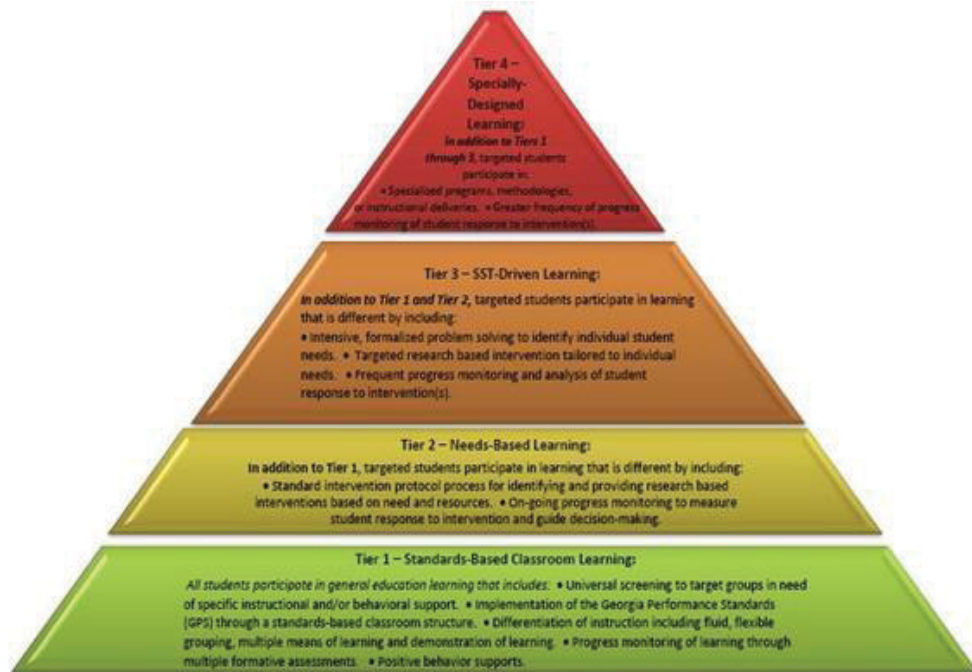


Figure 2. Georgia Student Achievement Pyramid of Interventions (POI). This figure depicts the progression students follow in the RTI process in Georgia (GADOE, 2011). *Any use of the material and reproductions must expressly state that all rights in and to the material belong to the GADOE. Please note that this permission is a revocable non-exclusive license granted by GADOE. The license is limited to the non-commercial use

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The RTI model seeks to investigate the common outcomes predetermined by wrong placement (Johnson, 2000). This way, schools are forced to carry out an intensive research on specific data pertaining to each individual. The data are then used to prepare IEPs tailored to meet the student's specific needs. A total of 80% of students who undergo the RTI evaluation plan respond to the third tier set of instruction, 15% respond to Tier 2 and 5% respond to Tier 1. The result of this research is an indicator that lack of intense focus on specific student needs often results in erroneous placement (Buffum et al., 2008).

The focus on data is an indicator of RTI's objective relationship to disproportionality. This form of intervention is done in a timely and systematic manner. Universal screening, which is part of RTI, is an indiscriminating process that gives fundamental indicators of problems at an early stage. This increases chances of solving these problems early enough before they become too complicated and possibly lead to erroneous placement. According to Johnson (2000), the RTI model creates an awareness of different issues related with a student's cognitive abilities and at the same time provides a systematic method that solves this issue. The universal screening method together with data analysis based on a careful aggregation and analysis is what makes the RTI model a credible method of creating awareness and thus sparking responses aimed at

dealing with disproportionality. Moreover, following the RTI process with fidelity greatly reduces the chance of inappropriate identification or placement (Johnson, 2000).

The Pros and Cons of RTI. There has been much controversy over the effectiveness of RTI as a solution to disproportionality. This model of intervention has been associated with a number of advantages. The fact that all students are eligible for this model of intervention is attributed as one of the successes attached to RTI. This model does not eliminate students on the basis of age. This allows teachers and parents to easily identify if a student's skills, performance and general behavior are in line with his or her age and grade level (Chidsey & Steege, 2010).

RTI focuses on an individual's data. This requirement inevitably demands that schools update the data on their students. Additionally, the intensity of the three tiers forces schools to actively participate in the intervention. This method of intervention enables sustainable leadership. Moreover, it equips school principals with the necessary structures needed to address the problem of disproportionality in special education (Chidsey & Steege, 2010).

As an intervention model, RTI is programmed to work with the regular system of education. The students do not suffer disruptions from regular school activities. Students do not need to take tests that would help determine their cognitive abilities. Rather, the RTI assessments are based on a student's performance on grade-level class activities with regular school-based exams (Chidsey & Steege, 2010).

The RTI process targets to exclude bias in the referral process by employing research-based interventions and making data-based decisions. However, there continues to be cynicism regarding the fidelity, procedures, and implementation of RTI (Fuchs, Fuchs, & Stecker, 2010; Fuchs, Fuchs, & Compton, 2010; Kavale, Kaufman, Bachmeier, & LeFever, 2008; Kavale & Spaulding, 2008; Kavale, Spaulding, & Beam, 2009; McKenzie, 2009; Richards et al., 2007; Werts, Lambert, & Carpenter, 2009). Concerns discussed in the literature include the lack of agreement for procedural issues, a lack of specific instructions in place that delineate schools with programs or timelines, and accountability issues with regard to who will collect necessary data and how often, and who decides on intensity, duration, and frequency. For RTI to be truly constructive, districts and schools will have to redefine the responsibilities of the general education and special education teachers. The general education teacher and the special education teacher would have to integrate their skills to make RTI effective for their students. Moreover, all educators need to advance their understanding and competence in data-based decision-making as these skills are essential for increased student achievement. Professional learning is essential at every level to achieve ideal results (Fuchs, Fuchs, & Stecker, 2010; Richards et al., 2007; Werts et al., 2009).

In a study conducted in 2009, Werts et al. surveyed several special education directors regarding their opinions of RTI. The results from the surveys proved a lack of agreement in what RTI even looks like. The directors reported varying procedures in

implementation, including the amount of time, the use of discrepancy data in conjunction with the RTI data, and the selection of the assessments used. Their opinions varied greatly which means that the results of RTI would vary across schools as well. Due to lack of agreement in the process, many opponents would say the use of RTI is still in its infancy and has too much uncertainty to be successful (Richards et al., 2007).

Additionally, even when RTI is carried out very well, there are still problems in eligibility processes for special education programs (Connor & Boskin, 2001; Delgado & Scott, 2006; Edwards, 2006; Ferri & Connor, 2005; Gravois & Rosenfield, 2006; Macmillan et al., 1996; Parette, 2005).

Throughout the literature, there are two overarching issues regarding RTI. With regard to interventions, the vast majority of the research is in the area of reading, limiting other content areas. Furthermore, much of the research is comprised of students at the elementary level. Research for other content disciplines and grade levels is very limited (Fuchs, Fuchs, & Compton, 2010; Kavale et al., 2008; Kavale & Spaulding, 2008; Kavale et al., 2009; Richards et al., 2007; Werts et al., 2009). Fuchs, Fuchs, and Compton (2010) stated “many researchers avoid middle and high schools entirely because of the scheduling problems and compliance issues often encountered when working with adolescents” (p. 22). Therefore, limited information regarding RTI and research exists regarding middle schools, high schools, and math content. Finally, research-based interventions for behavior are limited across the board (Fuchs, Fuchs, &

Compton, 2010).

Additionally, subjectivity has been associated with the RTI model at the level of instructional intervention. It is argued that the effectiveness of the intervention is determined by the teacher's ability to deliver the instruction as intended (Buffum, Mattos, & Weber, 2008). The student's RTI may reflect the teacher's effectiveness rather than his or her cognitive ability as initially intended. Additionally, the model offers a limited set of guidelines used in formulating and determining the appropriateness of intervention offered at the different levels (Buffum et al., 2008, p. 77).

According to Hosp and Madyun (2013) the three-tier model of intervention is accused of providing room for cheating. In this case, the cheating is associated with the fact that the extended period within which the analysis is carried out together with the intensive three-tier intervention gives room for low cognitive students to work hard. In relation to this, the RTI model makes it difficult to differentiate slow learners from students with learning disabilities. This often leads to cases of under representation of students in the special education program (Hosp & Madyun, 2013, p. 66).

RTI has also been associated with inaccuracy (Chidsey & Steege, 2010). The ability of teachers and parents to actively participate in the intervention process is labeled an enabler of bias. The two are thought to have the ability to actively participate in intervention and thus influence a student's outcome. The eventual outcome will likely

deliberately reflect the parent's or teacher's cognitive ability rather than the student's (Chidsey & Steege, 2010, p. 38).

RTI is another effort at solving disproportionality in special education. The basic structure of RTI is tailored to deal with the consistent patterns that have been associated with disproportionality. School districts should consider using RTI as a requirement of students' eligibility for special education. (Johnson, 2002).

Challenges Addressing Disproportionality. Although there has been much research about the history and predictors for minority students being over-identified as needing special education services, it remains a systemic problem. Minority students still struggle for equity in education. Hosp and Reschly (2004) stated that disproportionality is a multidimensional problem that demands more comprehensive examination of patterns that relate to multiple variables. Further, due to the lengthy history of inequity, factors that support disproportionality are complex, rooted in social and institutional practices that are not yet fully comprehended. Therefore, the significant challenge in addressing disproportionate practices in education is to be aware that simultaneous contribution of those multiple sources, and to develop interventions that can respond to the full intricacy of the issue (Skiba et al., 2008).

Although researchers have begun to measure and better understand the challenges of disproportionality, there is still much to be done to address the inequity in public schools. Much research has been done to demonstrate the inequity. However, much

work and research is still demanded to fully understand and address this multidimensional issue. More quantitative and qualitative research must be done to further analyze and address the disproportionate representation issues and patterns in an effort to offer better opportunities for all students.

A plethora of research has been done to demonstrate the continuing inequity in schools for many minority students (Arnold & Lassman, 2003; Connor & Boskin, 2001; Coutinho et al., 2002; Gravois & Rosenfield, 2006; Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). However, with all the research and implications, the problem still exists. As previously stated, disproportionate representation of minority students in special education programs is a multidimensional problem and requires the efforts of school, community, support agencies, and others to adequately address the issue. The reality is there is no quick fix, single approach solution. However, there is research that has investigated factors such as race, culturally responsive teaching, poverty, gender, and environmental factors as part of the multidimensional solution. By no means is this list exhaustive; many other factors have been researched and investigated.

Leadership Gender Differences

According to Barro and Lee (2010), the goal and object of education is to have national development throughout the effort of all genders. The national and state governments therefore strive to ensure uniformity in gender parity and achievement of

education uniformly regardless of gender. Although this has been achieved through a cost, the post-World War II period has registered higher number of girls' enrolment in all capacities of education (Buchmann, DiPrete, & McDaniel, 2008). However, girls' education yields many socio-economic benefits to the entire societies. Educated girls are less likely to marry early because they use their early life in schooling. These girls also raise the social-economic standard of their households through generating extra income.

Recent research data shows that females have by far surpassed their male counterparts in the acquisition of academic skills in industrialized countries. To conceptualize this aspect, measures as comparing the number of high school graduates, college education enrolment and tertiary graduates are used. The trend manifests that gap in education will widen in favor of women. Industrialized economies are experiencing dramatic changes due to the blended supply of skilled labor. On the other hand, retarded female children are seen to perform much better in education than the males. Females tend to climb higher on the academic ladder than males are (Buchmann et al., 2008). This implies that females are able to persevere through the conditions in special classes and get to higher grades, unlike the males.

The current trend in education started in the post-World War II periods when males dominated the skilled labor market. However, when education investment increased its importance, females started to gain a new momentum (Buchmann et al., 2008). The number of females achieving academic qualifications is increasing at a very

high rate. The possible outcomes of the situation imply that in the near future, males will be dominating in the low skilled jobs while females clutch the highest paying jobs in the labor market. The current trend in education therefore shone light to the near future market implications.

The government and other non-governmental organization played the greatest role in enhancing the great achievements in females' education. This was through fighting for the rights of a girl child. This was possible because barriers that prevent girls to attend school are known, and there exists known solutions. Furthermore, the governments and other groups fighting for the rights of a girl child had been focusing on enrollment. This had been the reason for high rate of the girl child enrollment in school (Goldin, 2006). Although the enrolment rate of females in education is still lower than that of males, females are able to rise in the ladder to a higher level than males.

Domineering effect of female in higher level of education and schooling has taken a long time for the result to be evident. In the mid-twentieth century, women's enrollment in higher levels of learning than their male counterparts was in eleven countries only. The number had increased by 2010 to be 43 nations (Barro & Lee, 2010). These countries include those with advanced economy in Europe, Canada, U.S., and some Middle East countries.

University graduates in the advanced economies are female. According to information gathered by Barro and Lee (2010), in the 24 most developed countries, 13

countries had more female than male graduates. However, the number of graduate women was higher than that of men even in mid twentieth century. High women enrolment in the world only increased the number of women in tertiary education. The number of female teachers in special schools is also higher in the advanced economy than the males. Since the ratio is increasing over the years, females will continue to dominate as special education teachers while males get to other low skilled jobs.

Female learners are believed to pursue major subjects in tertiary level while their male counterparts enjoy easier courses. This has registered the first world record since females are associated with light tasks and easier courses in tertiary level. However, according to Goldin, (2006) females taking major subjects may have reached a point of diminishing and consequently registering a decline. For instance, the number of females taking major courses in the U.S. has declined over the years from 1970 where the index was 50 to an index of 20 in 1994.

After the compulsory primary education, there is gender disparity in enrolment in higher education (Buchmann et al., 2008). The ratio of male to female enrolment in tertiary education in the U.S. has been increasing over the years. The increasing enrolment of females in the tertiary level and high dropout rate of males after higher education predicts a new face of leadership in the future. Education source of power and anyone with academic skill can rise to any leadership position. Therefore, the situation

predicts that females will resume leadership positions in schools as the principals and in major departments.

Leadership in education has been greatly influenced by significant change in post industrial's nature of work. This period has defined nature of work in a different way that is appropriate for the twenty-first century. Countries that are members of Organization for Economic Cooperation and Development (OECD) are implementing leadership in schools through an approach in management suitable for the post modernism period (OECD, 2001). Since most schools are managed by the government, it has to take responsibility in ensuring that all reforms necessary for leadership that will suit the management approach. Therefore, the government gives approaching strategy to the management to ensure that the reforms are achieved.

In normal school settings, the principals have the autonomy obligation in ensuring successful leadership. Most principals use two different approaches in leadership. First, some use the common model of leadership that is more hierarchical. On the other hand, others use a model that is more flexible to incorporate teachers and the whole community into the leadership (Riley & Louis, 2000). In most school leadership settings, the approach that incorporates teachers and the community is more preferred. Moreover, the approach is more effective in ensuring effective management.

Decentralization in decision making by the school's management is consultative, and the final decision made is acceptable. Furthermore, the approach nurtures good

relationships in the teaching staffs and develops positive perception of students towards their schools and teachers. Positive perception of learners leads to higher performance in their studies through the instinct motivation they receive.

Although a decentralization system of leadership is more effective, it varies from institution to institution (Riley & Louis, 2000). Factors such as culture and social settings of a society affect changes in school leadership. Where the management and schools' organization are the central management aspects, the level of classroom changing is less than when the culture and social ethos are prioritized. However, the devolved system has more influence on the role of the principal but has little influence on the society's behaviors. The system is effective in managing the schools' assets rather than transforming learners' attitudes towards improved performance.

A good leadership approach that makes learners improve performance motivates teachers to love their careers. Leadership at the school level creates a sense of professionalism among the teachers. Improved professional services that yield work efficiency, autonomy in the profession and improved working conditions improve teachers' lives (Hargreaves, 2000). Teachers prefer good leadership skills from the principals and look for good leadership qualities in them like honesty, supportive, communicative, responsible and those who have a vision for students and the school as well (Day, Harris, Hadfield, Tolley, & Beresford, 2000). On the other hand, teachers have low morale when the principal uses a hierarchical system of leadership. The

impacts are manifested through low teachers' output that results in poor learners' performance.

According to Day et al. (2000) effective leadership enhances good performance in schools. Best performing schools have principals who work with the teachers in leadership forums to improve learner performance. The principals have leadership qualities making them ensure all leadership decisions they make are measurable and attainable. Performance in potential schools therefore can be significantly determined by the leadership approach. School leadership that makes cohesive staffs and flows from the central position is usually more effective than a hierarchical form of leadership and have higher potential of learners' performance.

Although leadership in the school flows from the principal to other people in the school system, the system can give a chance to the people in the system to practice the central role (Day et al., 2000). The current management organization allows other people in the system to be given leadership responsibility on some issues so as not to invest all powers to the principal. McLaughlin and Talbert (2001) reveal that in the United States, where the system has affected, there are no instances in school leadership where the principal has vested all responsibilities in his or her office. They respect other staffs' profession and assign some duties to them to execute. In addition, they practice a centralized form of leadership in sorting other staffs' ideas in enhancing their views and

vision. This form of leadership has allowed teachers to work their vision in enhancing collective goals (Copeland, 2001).

According to Harris and Muijs (2002), knowing how to sustain improvement in school is the greatest challenge people face rather than on improvement itself. The ability to maintain the pleasant performance depends on the internal organization and performance of the school. Sustainability therefore requires the organization to have effective leadership that deploys a centralized approach in leadership. When many staffs contribute to leadership, they are likely to have good improvements in performance. That is, teachers' leadership where the teaching staff is involved in leadership processes is more encouraged in the school's management.

However, a top-down leadership system still dominates in some schools and forms the barrier to effective teacher leadership. Teacher leadership is only possible where the principal and school management relinquishes power to working staffs and acceptance of colleagues' influence by teachers. When the system is effective, the principal becomes the outmost head of leaders and his or her obligation is ensuring the teacher leaders perform their duties as instructed. To enhance the effectiveness of teacher leadership, the system has to change consistently in structure (Barth, 2001). This ensures that the school enjoys a variety in leadership approach as other varieties of leadership are incorporated in the system.

To enjoy the outstanding benefit in implementing teacher leadership, the system has to utilize variety of personnel in leadership (Barth, 2001). When the teacher leadership is widespread, multiple teachers' role is experienced. Teachers in leadership forum perform as researchers in leadership, as teachers, and as team leaders. Teachers will enhance their profession and leadership skills while at the teacher leadership position. Moreover, issues in the organization are solved effectively because the roles are centralized.

Teacher leadership will solve the shortage of leadership in the education sector. According to Copeland (2001), there is a massive shortage of leaders in the United Kingdom and the United States due to mobility of leaders and quality of candidate. Applying teachers' leadership will solve the problem of leadership in schools as potential leaders will show their skills in teacher leadership. The leadership approach will also ensure gender parity in education as learners will have role models to emulate. Therefore, it is advisable to consider gender equality in appointing teacher leaders.

When it comes to gender, females tend to be more committed to the teaching profession than their male counterparts. In a multi-level analysis of more than 53,000 teachers in the 1990-1991 school year, women reported that they were more committed to the teaching profession than men (Ingersoll & Alsalam, 1997). Helgensen (1990) followed five successful businessmen and four female executives to determine if there

were differences in the way men and women manage. The following patterns emerged for men:

1. They worked at an insistent pace, without breaks in activity.
2. They spared very little time for activities that were not work related.
3. They preferred live action encounters.
4. They operated their days with interruption, discontinuity, and fragmentation.
5. They maintained a network of relationships with people outside their workplace.
6. They were absorbed in the organization's operations and lacked time for reflection.

For females, the following patterns emerged:

1. They worked at a steady pace, but did take breaks during the day.
2. They make time for activities outside the workplace.
3. They preferred live action encounters, however, did attend to mail.
4. They did not view unscheduled tasks and encounters as interruptions.
5. They maintained a network of relationships with people outside the workplace.
6. They took time for reflection (pp. 19-23).

This study demonstrates significant differences in the way males and females view their jobs and how they go about their jobs. More specifically with regard to educational

leadership, females tend to be problem-solvers, have high expectations for themselves, have high expectations for others, and are task-oriented (Shakeshaft, 1999). Moreover, in a comparison study by Ortiz and Marshall (1988), female leaders contribute to better teacher performance and higher student achievement because female leaders spend more time and effort on interaction with teachers, supervision, and are heartily involved in instructional leadership.

Leadership Induction and Stability

The relevance of induction programs has been recognized since the 1980s. Up to now, induction centers share a similar goal aimed at improving the quality of service in the education field by lowering turnover rates. The New Teacher Centre (NTC) is a nationally recognized induction center aimed at mentoring both teachers and members of the administration (Moir, 2011). Since the establishment of this center, there has been a recorded decrease of turnover rates of approximately 45% among new teachers. This achievement is related to the objective mentoring programs offered by this academy. The trained mentors employed by the NTC mentor new teachers and enable them to focus on their students throughout their teaching. An analysis of the NTC reports reveals that 94% of teachers from Santa Cruz who have undergone the mentorship program at the center have stayed in their profession for a period of 7 years (Moir, 2011).

The outstanding result from the above case is enough proof that there is a direct relationship between induction centers and teacher and principal retention rates.

Administration, teachers, students, and parents at large benefit from the mentoring services offered by induction centers as an effort of school districts. An individual's leadership and teaching skills are nurtured, protected, and fostered through mentoring (Villani, 2009).

The variability in degrees and teaching practice among teachers often leads to different outcomes. The differences may lead to intimidation and lack of morale among the low outcome teachers who may be forced to leave the profession. Induction centers have developed mentoring programs aimed at dealing with this turnover related issue. Induction programs focus on harnessing the teaching skills together with the capabilities of new teachers and developing them for sustainability. By encouraging visitation programs, new teachers are able to have a better perspective of the situation they are facing and understand it as a necessary part of adapting to the teaching profession. With this realization, it is easier for a teacher to work on such challenges while maintaining his or her position within the profession as opposed to a previous decision to leaving the profession (Austin & Odell, 2012).

Induction programs provide a solid foundation upon which leaders are able to develop structures and policies aimed at motivating both teachers' and students' retention within the educational program (GADOE, 2011b). Since disproportionality can be dependent on tenure, experience, and gender, mentoring programs better enable leaders to develop the positive aspects that make up these three factors. Leaders are coached on

how to use their leadership skills and experience to develop sensitive and goal oriented policies. These policies should address teacher as well as student retention (Capra, 2002).

Induction programs equip teachers with the necessary skills needed to develop their teaching skills (GADOE, 2011b). Special education program students need individualized and specialized instruction and, thus, special teaching methods. Teachers who possess highly-developed teaching methods along with a positive attitude will likely ensure higher student achievement. Induction programs are aimed at improving the teaching process and setting the right learning environment for students. Teachers enrolled in such academies tend to have a fresh outlook on the teaching profession. Such teachers exhibit a high sense of sensitivity and judgment when dealing with students. They exhibit a need for understanding the physical, social, and mental orientation of a student as a factor that determines their level of performance (Whitaker et al., 2008).

According to Augustine, Gonzalez, Ikemoto, Russell, and Zellman (2009) leadership sustainability allows education systems to meet the needs of special program students enrolled in the system. This is effected without jeopardizing the ability of future students to enjoy the same. For example, as a fulfillment of the above recommendations, the Ohio state has adopted a strategic leadership plan that has seen to an increase in the retention rates of teachers and special education directors at large (Ross, 2013). The plan sought to ensure that mentoring programs put in place are in line with standards of good

leadership as prescribed by the Ohio principal standards (Ross, 2013). These standards put emphasis on the level of experience and tenure of principals. As described in the leadership framework, the two factors are appropriately analyzed in line with the future goals of the program. Special education directors who have a high level of experience together with a high tenure are able to conduct a sustainable form of leadership to enhance program outcomes.

Experience and tenure are key to sustainable leadership (Norton, 2003).

According to Norton (2003), teachers led under a sustainable leadership enjoy a secure working environment and tend to interact better with students. Sustainable leadership creates room for objective decision-making. Objective reasoning can be a way to solve fundamental problems like disproportionality in the special education sectors. Naturally, the degrees of tenure of school principals serve as solid foundations upon which healthy and productive relationships and decisions are arrived at. The decisions are tailored to meet both teacher and student needs without bias that may arise from subjective factors like race, color and gender. Sustainable leadership is the backbone to both teacher and student high retention and performance rate, a fact that Whitaker et al. (2008) supported.

The objectivity behind sustainable leadership is in turn transferred to teachers who develop a positive attitude towards their students (Capra, 2002). Most teachers tend to undermine the capability of all students enrolled in special education programs; some of whom do not rightfully belong here (Norton, 2003). A high percentage of these

students in turn develop a negative attitude towards education. Their teachers attach this attitude to stigmatization. Sustainable leadership is a tool with which subjective stereotypes used to define special program students can be done away with. Students enrolled into special programs were defined by appropriate academic standards applicable to all of them. This comes with a double advantage. In the first place, only students who qualify for special programs can be enrolled in these programs. Secondly, teachers would have the right attitude and good will to harness the capabilities and talents of these students. Students too would develop a positive sense of belonging in this category as causes of disproportionality attached to subjective factors like race and color will no longer be applicable (Capra, 2002, p. 56).

Leadership sustainability is essential in transforming and transmitting the culture of a specific education system (Austin & Odell, 2012). Sustainable leadership is not standard. Special education directors are expected to adopt and practice a global worldview. This worldview is a gateway through which principals are able to understand the system within a multi-cultural context. This accommodative type of leadership often results in high retention rates of teachers. Teachers working in a culture that fosters a sense of belonging are more motivated to fulfill their professional obligations. Sustainability of positive, flexible leadership is directly attributable for this retention of teachers (Austin & Odell, 2012).

Sustainable leadership helps both the principals and teachers differentiate between their personal priorities and what is expected of them by the system (Norton, 2003). The inability to define priorities and align them with system expectations has had a negative effect on the quality of leadership. School teachers who are more inclined towards fulfilling their personal desires tend to engage in premature turnover compared to those whose interest lies in fulfilling their jobs, a fact that Austin and Odell (2012) supported. A sustainable leadership sets the culture and expectations of teachers. These goals will in turn motivate and dictate the activities in which the teachers are involved. Naturally, attainable goals are met by objective and education-based activities. Failure to set these goals will result in high turnover rates for teachers because they will seek the motivation that lacks in their job elsewhere. Special education directors who set interesting goals for their teachers indirectly give their teachers an interesting reason to go to work. They shape the attitude of these teachers in the way they view their teaching responsibility and how much value they attach to their profession (Villani, 2009).

According to Augustine et al. (2009), a sustainable leadership takes into account crucial factors that help understand and categorize the capabilities of students. Based on the fundamental rights of communication and collaboration, a sustainable leadership focuses on analyzing the important aspects of a student's profile. These aspects are used to arrive at the objective decision on the mental and educational capabilities of students. Unlike in the subjective grouping methods, teachers under utilize their teaching skills due

to preconceived notions that suggest underperformance by special education students. A focus on a student's profile ensures that students are objectively placed in their respective educational categories.

Additionally, teachers will find it easy to meet the IEPs of students in such cases, as they are able to deal with students from a point of knowledge and understanding (Augustine et al., 2009). The ability of a teacher to understand his or her students determines the level of preparedness of these teachers. Only good leadership can enable this. The above assertion was believed to be true in a study conducted in the states of South Carolina, Arkansas, and Georgia (Austin & Odell, 2012). In these states, school districts have enabled school systems that sustain good leadership plans. Leaders are able to effect sustainable leadership strategies that have in turn enabled high performance and low turnover rates for teachers (Austin & Odell, 2012).

A sustainable leadership does not only assist in solving the problem of disproportionality, it also goes a long way in ensuring that special education students develop a positive attitude towards their learning programs (Villani, 2009). School principals may have the tenure and experience to effect good leadership, but this may not be enough. Moreover, a sustained leadership cannot be achieved from an individual effort. Facilitating sustained leadership requires the collective efforts of different members of school districts. In response to results collected from induction forces set by different school districts, "a number of induction programs have been set up to help

sustain good leadership and to address the teacher and principal high turnover rates” (Capra, 2002, p. 67).

Sustainability in leadership is very important, and research has shown that high principal turnover many times leads to higher teacher turnover, negative impact on student achievement, and poor school climate (Taylor & Tashakkori, 1994). In a study conducted by the National Association of Elementary School Principals (NAESP), researchers found a turnover rate of 42% among elementary principals during a 10-year period from 1992-2002. Additionally, a similar study revealed a 50% turnover rate among secondary school principals during the 1990s with the expectation that the turnover would increase (Educational Research Service, 1998). With such high turnover in school personnel, school districts must recognize and address the issue. In response to the turnover in leadership in education, Norton set forth the following recommendations:

1. Adopt an official School District Policy on Personnel Retention
2. Develop an Action Plan
3. Monitor Personnel Turnover
4. Personalize Retention Strategies
5. Implement Effective Retention Programs
6. Evaluate Retention Results and Revise Plans Accordingly (Norton, 2003, pp. 54-55).

Based on these findings and the shortage of exemplary leadership, many states have put at least some of these recommendations into place to strategically plan and retain quality leadership. The GADOE responded by developing an induction task force in 2011 to investigate the research and develop induction and mentoring programs for principals and teachers (GADOE, 2011b). In Georgia, the average tenure for principals is only 3.5 years at a time when exemplary leadership is needed the most. Leithwood, Louis, Anderson, and Wahlstrom (as cited in GADOE, 2011b) found that “Sustained improvement in student learning rarely occurs without a great principal. Principal leadership is second only to teaching among school-based factors that influence student learning” (p. 1).

More important and relevant to the current study, the GADOE saw the need to have an induction program for new special education directors. The purpose of the Special Education Leadership Development Academy (SELDA) is to support new special education directors in complying with the federal mandates of general supervision (GADOE, 2013). The development of this academy indicates a need and purpose to address leadership sustainability in the area of special education.

Importance of Development Programs/Academies

Academies are educational centers for teachers and administrators. On the basic level, academies are aimed at motivating both instructors and administrators to face and solve the challenges they encounter while executing their professional obligations other

than quitting (Kouze & Posner, 2007). The effectiveness of principals and teachers is sharpened to ensure that they both carry out their duties in an objective manner. As leaders, principals are coached on how to overcome their individual preferences and beliefs that may affect teacher performance. At a secondary level, teachers are directed through objective procedures that will foster anti-bias ideas about special students (Whitaker, Whitaker, & Lumpa, 2008).

According to Hosp and Reschly (2004), teachers are encouraged to share on their strengths, weaknesses, and challenges. This information is compounded with skills and previous experiences in similar fields, an action that is necessary for the development of an all-inclusive strategy. On the other hand, school leaders are encouraged to work with their teachers and identify all the physical, social and economic conditions that may lead to high turnover rates. This information is then used in developing necessary strategies that foster teacher retention. Induction centers do not only foster sustainable leadership, they also coach leaders on how to use effective communication skills to develop the right kind of working environment for teachers. A similar study conducted in the state of North Carolina from 2002 to 2004 provided not only the data required to improve teacher working conditions in North Carolina, but also formed as a basis upon which other school districts customized their teachers' working reports (New Teacher Center Report, 2012).

Sustainable leadership ensures that teachers are provided with motivation and the right working environment needed for high quality service delivery (Austin & Odell,

2012). Additionally, induction programs are ideological enablers of the fight against disproportionality in special programs. It is the responsibility of school districts to facilitate sustainable leadership by providing special education directors with the necessary support for their leadership endeavors. Additionally, principals and teachers should be sensitive to the importance of enrolling and participation in induction programs (Capra, 2002).

Summary

As demonstrated by the research, disproportionality is a complex, multidimensional issue that progresses with each new set of challenges. Continued research is vital to assisting school districts in addressing the issue. Addressing this issue will be on-going as the population demographics change and the educational systems continue to evolve.

Chapter III

RESEARCH METHODOLOGY

This chapter contains a description of the research method, design, and procedures used to answer the six research questions of this study. Initially, the nature of this study is described in terms of the quantitative methodology and research design. Then, the population of interest is discussed and the instrument used is presented. The nature of the data used in this study is described in the next section, followed by a description of the specific data collection and analysis procedures followed. Ethical issues are addressed and the chapter ends with a summary.

Research Design

The current study employed a non-experimental survey design with correlations methods and group comparison (Vogt, 2006). The non-experimental design employed in this study was used because there could not be a manipulation of the independent variables (the special education directors' tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI) and no random assignment of groups based on these independent variables as would be required in an experimental study. Rather, the independent variables of interest in this

study were preexisting characteristics of the participants, making a nonexperimental research design most appropriate (Vogt, 2006).

The independent variables were tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI. Tenure as a special education program director was an ordinal variable. Gender was a dichotomous nominal variable. Years of experience in education was an ordinal variable. Race or ethnicity was a dichotomous nominal variable. Level of implementation of RTI was an interval-level variable. Gender was assessed as either male (coded as 0) or female (coded as 1). Tenure as special education director was recorded as the number of years in the current position as district special education director (1 to 5, 6 to 10, 11 to 15, 16 to 20, 21 to 25, 26 to 30, and 31 or more). Total years of experience were recorded as the number of years of experience working in the education field (1 to 5, 6 to 10, 11 to 15, 16 to 20, 21 to 25, 26 to 30, and 31 or more). Race or ethnicity was coded as African American (coded as 1) or not (coded as 0).

The dependent variables in this study were the two disproportionality weighted risk ratios described below. The identification weighted risk ratio was a ratio-level variable. The disciplinary weighted risk ratio was a ratio-level variable.

Participants

The population was the 180 special education program directors in the State of Georgia. There was one Director of Special Education in each school district in Georgia,

and these individuals compose the population of interest. The participants consisted of those Special Education Directors in the State of Georgia who consented to participate in the study. One hundred and fifty five directors completed the survey. A total of 155 individuals participated.

Instrumentation

The data for this study came from (a) a brief survey and (b) archival data obtained from the GADOE website. All special education directors in Georgia were asked to complete a brief survey with basic demographic information (tenure as special education program director, gender, years of experience in education, and race or ethnicity) and an assessment of the extent of implementation of RTI.

Implementation of RTI was assessed with the five items shown in Appendix A. The items were developed to assess the implementation of RTI in each school district, the monitoring of RTI in the school district, teachers' commitment to RTI in the district, support staff's commitment to RTI in the district, and principals' commitment to RTI in the district. Each item was assessed on a six-point rating scale ranging from 1 to 6 with higher scores (*strongly agree*) indicating a more extensive level of implementation and commitment to RTI than lower scores (*strongly disagree*). The total score for implementation of RTI was computed as the sum of the responses to these five items. These total scores were used for the multiple regression analyses and four groups were

created based on these total scores for the ANOVA analyses. Therefore, higher scores indicated a more extensive level of implementation and commitment to RTI.

The reliability and validity of the RTI scale was examined through a validation process and a pilot study. Internal, external, face, and test validity factors were examined by each pilot participant. The validation process consisted of questioning five experts in the field regarding the questions on the RTI scale. These individuals were asked if the questions are easy to understand, if there is an adequate match to the purpose of collecting the RTI data and the items, or if the items are in need of revision. In addition, these individuals were asked if the cover sheet and directions are easy to read and use and if there are any other questions they would recommend adding to the RTI survey. None of these individuals gave any indication that there were any problems or required revisions to the survey. Only external validation was a concern as there may be issues with generalizability.

A pilot study was then conducted to collect data on the instrument for purpose of establishing reliability of the RTI composite score and determining if there is any additional information required on the directions or revisions to the wording of the questions. A total of 22 Special Education Directors participated in the pilot study. All participants completed all survey items. Table 1 contains descriptive statistics for the demographic and background characteristics of the pilot study sample. Most of the pilot study participants were female (77.3%). The most common number of years of

experience in the district were 10 to 15 years (31.8%) and 1 to 5 years (27.3%), with no participants being in the district for longer than 25 years. All of the participants had been in public education for at least 10 years, with 36.4% being in public education for 30 or more years. Most of the participants were White (86.4%) with the remaining 13.6% being Black or African American. None of the participants were Hispanic.

Because these scores were based on the sum of five items with possible scores from 1 (strongly disagree indicating a low level of implementation) to 6 (strongly agree indicating a high level of implementation), the possible range of scores was from 5 to 30. Actual scores ranged from 9 to 25. The average score was 14.95 ($SD = 4.20$). The internal consistency reliability coefficient (Cronbach's alpha) was .85, indicating a high level of reliability for scores on this scale. Based on the results from the analysis of the validity and reliability of the survey, no changes were made to the survey prior to the main study data collection.

Table 1

Demographic and Background Characteristics of the Pilot Study Sample

Variable	<i>n</i>	%
Gender		
Male	5	22.7
Female	17	77.3
Years in the district		
1-5	6	27.3
6-10	4	18.2
11-15	7	31.8
16-20	3	13.6
21-25	2	9.1
26-30	0	0.0
31+	0	0.0
Years in public education		
1-5	0	0.0
6-10	0	0.0
11-15	3	13.6
16-20	7	31.8
21-25	3	13.6
26-30	1	4.5
31+	8	36.4
Race		
American Indian or Alaska Native	0	0.0
Asian	0	0.0
Black or African American	3	13.6
Native Hawaiian or Other Pacific Islander	0	0.0
White	19	86.4
Ethnicity		
Hispanic or Latino	0	0.0
Non-Hispanic or Latino	22	100.0

The data on disproportionality for minority students in special education were obtained through the GADOE website. Data from the 2012-2013 school year were the most recent data available and were used in the current study. It was expected that the data obtained from the GADOE website had very high reliability because these data are used to make all manner of policy decisions including Federal and State-level funding decisions. Two measures of disproportionality were examined. The first is the measure of disproportionate representation of minority students in special education as measured by the identification weighted risk ratio. This is termed the identification weighted risk ratio and is computed via the following formula:

Identification weighted risk ratio =

$$\frac{\frac{\text{number of minority students in special education}}{\text{number of minority students}}}{\frac{\text{number of White students in special education}}{\text{number of White students}}}$$

The second is the disproportionate representation of minority students in special education among students who were suspended or expelled as measured by the weighted risk ratio. This is termed the disciplinary weighted risk ratio and is computed via the following formula:

Disciplinary weighted risk ratio =

$$\frac{\frac{\text{N of minority students in special education suspended or expelled}}{\text{N of minority students in special education}}}{\frac{\text{N of White students in special education suspended or expelled}}{\text{number of White students in special education}}}$$

Taking the first measure as an example, the numerator of this formula is the proportion of minority students in special education (e.g., the total number of minority students who are in special education divided by the total number of minority students). For example, if in a particular district there were 100 minority students in special education out of 800 minority students in the district, the numerator of this equation would be $100/800 = .125$. The denominator is the same ratio but for White students. So, if there were 1,000 White students in special education out of 20,000 White students in the district, the denominator would be $1,000/20,000 = .050$. The identification weighted risk ratio is the ratio of these two proportions, or $.125/.050 = 2.50$ for that district. This indicates that a minority student is 2.5 times more likely to be in special education as a White student in this district. The identification weighted risk ratio for each district was computed and these values served as the first dependent variable scores in this study. The same process was used to compute the second weighted risk ratio.

The accuracy of these measurements rests on the fact that disproportionality was specifically defined in the current study as the weighted risk ratio, and therefore the weighted risk ratio was assumed to be a valid measure of disproportionality. According to the Bonnie Dye (personal communication, April 21, 2002), Program Specialist with the GADOE's Department of Special Education Services, in order to ensure the accuracy of the weighted risk ratio, the data were replicated in excel for several districts using the formula provided above. The data points for each cell within the spreadsheet were

replicated for verification and quality assurance. “N” sizes were verified against data submitted in the district student record, and ED Facts reports are used as those data are reported to Office of Special Education Programs (OSEP; Bonnie Dye, personal communication, April 21, 2014).

Data Collection

Approval to conduct this study was obtained from the Institutional Review Board at Valdosta State University prior to data collection in order to ensure the rights of the participants are protected (see Appendix B). The GADOE special education director, Debbie Gay, had given permission for the current study to occur. The participants in this study read and signed an informed consent statement prior to completing the survey. The survey consists of only four demographic/background questions and the RTI items and did not present a source of significant stress for the participants. All data files for this study were kept on a password-protected USB drive in the researcher’s secure office.

Once the Institutional Review Board granted permission to conduct this study, the survey was administered and archived data were compiled. The GADOE special education director, Debbie Gay, agreed to provide information to all special education directors in the “Friday e-mail blast” one week prior to data collection. The district-level Special Education Directors who received this E-mail blast received information outlining the project containing a link to a Survey Monkey data collection site. The site contained only two pages. On the first page, the potential participants viewed the

informed consent statement shown in Appendix A. Upon giving electronic consent (by clicking on the “I agree” button), the participants were taken to the second page which contained questions regarding the school district in which they were the special education director, the number of years that they have held that position, the number of years employed in the education field in any capacity, gender, and race or ethnicity, as well as the items related to RTI. The responses to the first survey question were used to link each special education director to the district-level data on disproportionality. One week was allowed between the sending of the invitations and closing the survey, with a reminder sent 2 days after the initial invitation. There were no responders via this data collection.

The second round of data were collected at the fall meeting of the Georgia Council for Administrators in Special Education (G-CASE). This conference was one week after the initial survey was sent out electronically. A total of 99 respondents were obtained in this round. The third round consisted of phone calls placed to the special education directors who did not respond during the first or second round and resulted in obtaining an additional 56 participants for a total of 155 participants. In the third round, the purpose of the study, informed consent form, and directions for completing the survey were read to the phone participants. The phone calls were placed during the first 2 weeks of December 2014.

A brief comparison was made between the 155 individuals who completed the demographic survey and those who did not. Statistics on the weighted risk ratios are shown both for the responders ($n = 155$) and the nonresponders ($n = 34$) in Table 2. For the disciplinary weighted risk ratio, values for nonresponders ranged from 0 to 2.71 with a mean of 1.30 ($SD = .89$) whereas the values for responders ranged from 0 to 21.87 with a mean of 2.25 ($SD = 2.01$). For the identification weighted risk ratio, values for nonresponders ranged from 0 to 20.57 with a mean of 2.53 ($SD = 3.47$) while values for responders ranged from 0 to 28.76 with a mean of 3.40 ($SD = 2.76$).

Table 2

Descriptive Statistics for Continuous Independent Variables in the Main Study Sample

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum	Skewness	Kurtosis
Disciplinary weighted risk ratio						
Nonresponders	1.30	.89	0	2.71	-.37	-.98
Responders	2.25	2.01	0	21.87	6.36	59.28
Identification weighted risk ratio						
Nonresponders	2.53	3.47	0	20.57	4.47	23.35
Responders	3.40	2.76	0	28.76	5.31	45.51

In order to determine if the disproportionality values differed to a statistically significant extent between the responders and the nonresponders, two Mann-Whitney U tests were performed. These tests were statistically significant for both the discipline weighted risk ratio ($z = -3.87, p < .001$) and the identification weighted risk ratio ($z = -3.41, p < .001$). Examining the means in Table 2 indicated that the responders tended to have higher values for the two weighted risk ratios than the nonresponders as discussed in a delimitation of this study in Chapter 5.

For the main study, the district-level data on disproportionality consisted of the weighted risk ratio for minority students in special education. A data file was then assembled with district, tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI, and the weighted risk ratios, with one line for each district in the state for which the district's special education director completed the survey.

Data Analysis

All data were entered into SPSS 20.0 for analysis. The independent variables were tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI. The dependent variables in this study were the weighted risk ratios (also known as the relative risk), and two were computed: identification weighted risk ratio and the disciplinary weighted risk ratio. The weighted risk ratios were ratio-level variables.

Descriptive statistical analysis consisted of the range, mean, and standard deviation for the ratio variables (weighted risk ratios, tenure, experience level, and level of implementation of RTI) and the frequency and percentage for the categorical variables (gender and race or ethnicity). For the level of implementation of RTI, a Cronbach's alpha internal consistency reliability coefficient was computed to assess reliability. For the first two research questions, the inferential analysis consisted of a multiple linear regression analysis with tenure, gender, experience level, level of implementation of RTI,

and race or ethnicity as predictors of the weighted risk ratios. The first two research questions were:

1. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school districts' implementation of RTI significant predictors of the identification weighted risk ratio?

2. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the disciplinary weighted risk ratio?

For these questions, overall model statistics including the R^2 coefficient (the proportion of variance in the weighted risk ratio that can be explained by the predictors) and the F test for the statistical significance of the model were examined. Then, the individual predictors were examined for statistical significance through the β coefficients (standardized and unstandardized regression coefficients) and associated t tests for statistical significance.

The third and fourth research questions were:

3. Is there a significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio?

4. Is there a significant difference between levels of RTI and levels of a director's tenure on the disciplinary weighted risk ratio?

These questions were developed to examine possible interactions between level of implementation of RTI and tenure as a special education director. A factorial ANOVA framework was used to test the main effects and possible interaction effects between RTI and tenure as a special education director to answer the third and fourth research questions.

The fifth and sixth research questions were:

5. Is there a significant difference between levels of RTI and levels of a director's experience on the identification weighted risk ratio?

6. Is there a significant difference between levels of RTI and levels of a director's experience on the disciplinary weighted risk ratio?

These questions were answered in a manner identical to that for the third and fourth research questions, that is, by using ANOVA to determine if there was a statistically significant interaction between levels of RTI and levels of a director's experience.

Statistical Assumptions

For the multiple regression analyses, assumptions related to normality, homoscedasticity, multicollinearity, and outliers were examined. Normality was examined by creating histograms of the two weighted risk ratios. Homoscedasticity was examined by constructing scatterplots of standardized predicted values (x-axis) and

standardized residuals (y-axis) to determine if there are larger residuals at certain values of the predicted scores (which would indicate a violation of the homoscedasticity assumption).

In order to further examine the distribution of scores on the two dependent variables, standardized values were computed. Outliers were defined as scores with standardized values of three or more in absolute value on these standardized versions of the dependent variables. Skewness and kurtosis values were also examined for these two variables overall and for every combination of the levels of RTI grouping variable and both the experience and tenure variables. To examine multicollinearity among the independent variables for the multiple regression analyses, the correlations (point biserial correlations, Spearman correlations, and phi coefficients) among the independent variables and between the independent variables and dependent variables were examined. The variance inflation factor and tolerance statistics from the multiple regression analyses were also examined. A casewise diagnostics analysis was also performed consisting of Mahalanobis distance values, Cook's distance measures, and standardized dffit values.

For the ANOVA analyses performed for the last four research questions, skewness and kurtosis values were computed for the two dependent variables for each subgroup defined by levels of RTI group and both tenure and experience. Standardized scores were also examined within each of the subgroups. The distribution of the dependent variables was examined by constructing histograms, stem and leaf plots,

boxplots, and Q-Q plots. Shapiro-Wilk tests were conducted to test the normality of the scores on the two dependent variables for each subgroup for each research question. The assumption of homogeneity of variances was examined with Levene's tests.

Summary

This chapter contained a discussion of the research design and procedures used in the current study. The independent variables were tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI. The dependent variables were the two weighted risk ratios described in this chapter. The population of interest in this study consists of special education program directors in the State of Georgia, and the sampling plan for this study was discussed. Two data sources were described: (a) a brief survey and (b) archival data obtained from the GADOE. Permission to conduct this study was obtained from the Institutional Review Board at Valdosta State University. The GADOE special education director consented to allow the researcher to conduct the study and to facilitate the process. The participants completed an informed consent statement and the survey on Survey Monkey. Data were analyzed using SPSS through both descriptive statistical analyses and multiple linear regression analysis to answer the research questions.

Chapter IV

RESULTS

The primary purpose of this study was to examine how Special Education directors' leadership roles such as (a) tenure, (b) gender, (c) experience, (d) race or ethnicity, and (e) level of implementation of RTI impact district disproportionality for minority students in Georgia. The secondary purpose of this study was to determine the impact, if any, of implementation of RTI with special education directors' tenure and experience. One aspect of disproportionality that was examined was disproportionate representation in special education (termed the identification weighted risk ratio). Also examined was disproportionality in disciplinary actions taken against these students (termed the weighted disciplinary risk ratio).

The six research questions were:

1. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school districts' implementation of RTI significant predictors of the identification weighted risk ratio?

2. Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the disciplinary weighted risk ratio?

3. Is there a significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio?

4. Is there a significant difference between levels of RTI and levels of a director's tenure on the disciplinary weighted risk ratio?

5. Is there a significant difference between levels of RTI and levels of a director's experience on the identification weighted risk ratio?

6. Is there a significant difference between levels of RTI and levels of a director's experience on the disciplinary weighted risk ratio?

This chapter presents the results from the statistical analyses performed to answer the six questions. A preliminary analysis of the survey data was performed including an examination of descriptive statistics for the demographic characteristics of the sample as well as the data on identification weighted risk ratios and disciplinary weighted risk ratios. Then, preliminary analyses were performed and the inferential results for each research question are presented. The final section of this chapter includes a summary of findings.

Preliminary Analyses

There was no missing data for the respondents. The first step in the analysis was to compute descriptive statistics for the participants' demographic characteristics. Table 3 contains descriptive statistics for these variables for the 155 special education directors as collected. This information is provided so that readers can ascertain the nature of the sample in the interpretation of the results. Most of the participants were female and the most common racial category was White. For subsequent analyses the minority categories were collapsed into a single group resulting in two groups: White (79.4%) and minority (20.6%). The most frequent level of experience as a Special Education Director was 1 to 5 years. In subsequent analyses three groups were constructed for years as a Special Education Director: directors with 1 to 5 years of experience (50.3%), directors with 6 to 10 years of experience (23.2%), and directors with 11 or more years of experience (26.5%). In terms of the number of years employed in education the most frequent response was between 25 and 30 years. For subsequent analyses, years in public education were combined into three groups: directors with between 1 and 15 years of experience (20.0%), directors with between 16 and 25 years of experience (43.2%), and directors with 26 or more years of experience (36.8%).

Table 4 shows descriptive statistics for the five items from the response to intervention assessment. In response to the statement "Response to Intervention is completely implemented in your school district," most of the respondents either

somewhat agreed, agreed, or strongly agreed (58.0%). In response to the statement “Response to Intervention is completely monitored in your school district,” again the participants tended to either somewhat agree, agree, or strongly agree (55.5%).

Conversely, in response to the statement “Teachers in your district are completely committed to the RTI model in your district,” most of the participants either somewhat disagreed, disagreed, or strongly disagreed (52.9%). The participants tended to either somewhat agree, agree, or strongly agree (61.3%) to the statement “Support staff is completely committed to the RTI model in your district.” Finally, most of the participants either somewhat agreed, agreed, or strongly agreed (61.3%) to the statement “Principals are completely committed to the RTI model in your district.”

Table 3

Descriptive Statistics for Special Education Directors Demographic Characteristics

Characteristic	<i>n</i>	%
Gender		
Male	22	14.2
Female	133	85.8
Race		
American Indian or Alaskan Native	1	0.6
Asian	1	0.6
Black or African American	30	19.4
White	123	79.4
Ethnicity		
Hispanic or Latino	3	1.9
Not Hispanic or Latino	152	98.1
Years as a Special Education Director in the current district		
1 – 5 years	78	50.3
6 – 10 years	36	23.2
11 – 15 years	28	18.1
16 – 20 years	7	4.5
21 – 25 years	4	2.6
26 – 30 years	2	1.3
31+ years	0	0.0
Years employed in education		
1 – 5 years	1	0.6
6 – 10 years	7	4.5
11 – 15 years	23	14.8
16 – 20 years	33	21.3
21 – 25 years	34	21.9
26 – 30 years	37	23.9

31+ years

20

12.9

Table 4

Number (Percentage) of Responses with Descriptive Statistics for RTI Items.

Item	1	2	3	4	5	6	<i>Mdn</i>	<i>M</i>	<i>SD</i>
Response to Intervention is completely implemented in your school district.	4 (2.6%)	30 (19.4%)	31 (20.0%)	58 (37.4%)	25 (16.1%)	7 (4.5%)	4.00	3.59	1.18
Response to Intervention is completely monitored in your school district.	6 (3.9%)	27 (17.4%)	36 (23.2%)	57 (36.8%)	26 (16.8%)	3 (1.9%)	4.00	3.51	1.14
Teachers in your district are completely committed to the RTI model in your district.	8 (5.2%)	26 (16.8%)	48 (31.0%)	59 (38.1%)	13 (8.4%)	1 (.6%)	3.00	3.30	1.03
Support staff is completely committed to the RTI model in your district.	4 (2.6%)	24 (15.5%)	32 (20.6%)	55 (35.5%)	34 (21.9%)	6 (3.9%)	4.00	3.70	1.16
Principals are completely committed to the RTI model in your district.	6 (3.9%)	20 (12.9%)	34 (21.9%)	61 (39.4%)	29 (18.7%)	5 (3.2%)	4.00	3.66	1.14

Note. 1 (Strongly Disagree), 2 (Disagree), 3 (Somewhat Disagree), 4 (Somewhat Agree), 5 (Agree), and 6 (Strongly Agree).

Table 5 shows descriptive statistics for the Response to Intervention composite variable, the disciplinary risk ratio, and the identification risk ratio. There were no missing data on the three variables shown in Table 3. Scores for the Response to Intervention composite were computed as the sum of the responses to the five items shown in Table 5. These scores ranged from 5 to 29 with a mean of 17.75 ($SD = 4.96$). The internal consistency (Cronbach's alpha) reliability for this scale was .92.

For the disciplinary weighted risk ratio, values ranged from 1 to 21.87 with a mean of 2.25 ($SD = 2.01$). For the identification weighted risk ratio, values ranged from 0 to 28.76 with a mean of 3.40 ($SD = 2.76$). Standardized values were computed for these two variables and outliers were defined as scores with standardized values of three or more in absolute value. There was one outlier on the disciplinary weighted risk ratio ($z = 9.77$ corresponding to a disciplinary weighted risk ratio of 21.87) and one outlier on the identification weighted risk ratio ($z = 9.17$ corresponding to an identification weighted risk ratio of 28.76). These two values were replaced with scores three standard deviations above the mean on each variable. For the disciplinary weighted risk ratio (see Table 3), this reduced skewness from 6.36 to 1.60 while the kurtosis was reduced from 59.28 to 5.05. For the identification weighted risk ratio, the skewness was reduced from 5.31 to 1.31 while the kurtosis was reduced from 45.51 to 2.41. Descriptive statistics were recomputed after these modifications. Scores on the disciplinary weighted risk ratio

ranged from 0 to 8.28 with a mean of 2.17 ($SD = 1.33$) while scores on the identification weighted risk ratio ranged from 0 to 11.68 with a mean of 3.29 ($SD = 1.98$).

Table 5

Descriptive Statistics for RTI Composite Score, Disciplinary Weighted Risk Ratio, and Identification Weighted Risk Ratio

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum	Skewness	Kurtosis
RTI composite score	17.75	4.96	5	29	-0.41	-0.53
Disciplinary weighted risk ratio	2.17	1.33	0	8.28	1.60	5.05
Identification weighted risk ratio	3.29	1.98	0	11.68	1.31	2.41

Table 6 shows the correlations among the independent variables and between the independent variables and dependent variables. The correlations among the independent variables consisted of point biserial correlations (for the relationship between one dichotomous variable and one continuous variable), Spearman correlations (for the relationships involving one or more ordinal variables), and phi coefficients (for the relationship between two dichotomous variables). The highest correlation was between years as a Special Education Director in the current district and years employed in education ($r_s(153) = .44, p < .001$). RTI composite scores were positively correlated with years employed in education ($r_s(153) = .22, p = .007$). Years as a special education director in the current district was negatively correlated with the disciplinary weighted risk ratio, $r_s(153) = -.21, p = .01$. Disciplinary weighted risk ratio was positively

correlated with the identification weighted risk ratio, $r(153) = .19, p = .015$). Years employed in education was negatively correlated with the disciplinary weighted risk ratio, $r_s(153) = -.17, p = .037$.

Table 6

Correlations among Independent and Dependent Variables

	1	2	3	4	5	6	7
1 Gender	-						
2 Race	-.02	-					
3 Grouped years as a Special Education Director in the current district	.06	-.15	-				
4 Grouped years employed in education	.00	-.13	.44**	-			
5 RTI composite score	.11	-.04	-.00	.22*	-		
6 Disciplinary Weighted Risk Ratio	.01	-.05	-.21*	-.17*	-.02	-	
7 Identification Weighted Risk Ratio	-.05	-.00	-.07	-.08	.12	.19*	-

Note. The correlation between gender and race is a phi coefficient. The correlations between RTI composite scores, disciplinary weighted risk ratio, and identification weighted risk ratio, and both gender and race are point biserial coefficients. All

correlations involving years as a special education director in the current district and years employed in education are Spearman correlations.

* $p < .05$. ** $p < .001$.

Results by Question

Research Question 1: Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the identification weighted risk ratio?

Standard multiple linear regression analysis was performed to answer this research question. Gender and race were nominal (dichotomous) variables while RTI Composite Scores were on the interval level. For tenure as a special education director in the current school district and total number of years of experience in education, dummy coding was used. In each case the lowest level of experience was used as the reference category with dummy variables created for the two higher levels of experience. For tenure as a Special Education Director, directors with 1 to 5 years of experience was the reference category and the two dummy variables were indicators of directors having 6 to 10 years of experience and directors having 11 or more years of experience. For years in public education, directors with 1 to 15 years of experience was the reference category and the two dummy variables were directors having between 16 and 25 years of experience and directors having 26 or more years of experience.

Assumptions related to normality, homoscedasticity, multicollinearity, and outliers were examined. Normality was examined by creating a histogram of the identification weighted risk ratio which showed approximate normality. Homoscedasticity was examined by constructing scatterplots of standardized predicted values (x-axis) and standardized residuals (y-axis) to determine if there are larger residuals at certain values of the predicted scores (which would indicate a violation of the homoscedasticity assumption). The scatterplot showed approximate homoscedasticity. Multicollinearity was assessed by examining the correlations among the independent variables. As shown in Table 2, none of the correlations reached the level that would indicate problems associated with multicollinearity. In addition, variance inflation factor (VIF) and tolerance statistics were examined. As would be expected given the low correlations among the independent variables, no tolerance value was lower than .41 and no VIF statistic was greater than 2.42, again indicating that multicollinearity was not a problem for these independent variables. Casewise diagnostics indicated that standardized predicted values ranged from -2.90 to 2.70 demonstrating that no standardized predicted values were outside the range from -3.00 to +3.00 standard deviations from the mean. Outliers are typically defined as values more than three standard deviations from the mean indicating that no outliers were present in this data.

Mahalanobis distance values ranged from 2.75 to 19.30. A critical value of 20.52, for 5 degrees of freedom because there were five predictor variables in the model, was

used for the statistical significance test of the Mahalanobis distance measures for a p value of .001. Thus, none of the Mahalanobis distance measures was statistically significant indicating that there were no outliers. Cook's distance measures ranged from .00 to .18 and values < 1 indicate no cause for concern of the overall influence of the case. Standardized dffit values ranged from -0.49 to 1.25. A cutoff for standardized dffit values is an absolute value of 1.00 indicating that there was some evidence of an outlier, although the Mahalanobis distance statistical significance test, casewise analysis of outliers, and Cook's distance measures did not indicate any outliers.

Table 7 shows the results from the regression analysis. None of the predictor variables were statistically significant as predictors of identification weighted risk ratios. The R^2 indicated that only 4% of the variance in identification weighted risk ratios was explained by the independent variables, and this was not statistically significant, $R = .20$, $R^2 = .04$, $R^2_{adj} = .00$, $F(7, 147) = 0.83$, $p = .564$. Therefore, the answer to the first research question of this study was that a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI were not significant predictors of the disproportionality weighted risk ratio.

Table 7

Results of Regressing the Identification Weighted Risk Ratio on the Independent Variables

Variable	B	Std. Error	β	<i>t</i>	<i>p</i>
Constant	2.98	.76		3.94	< .001
Gender	-.39	.47	-.07	-.82	.416
Race	-.09	.40	-.02	-.22	.826
6 to 10 years as a Special Education Director in the current district	-.24	.41	-.05	-.59	.559
11 or more years as a Special Education Director in the current district	-.07	.44	-.02	-.16	.873
16 to 25 years employed in education	-.20	.45	-.05	-.45	.656
26 or more years employed in education	-.65	.51	-.16	-1.26	.210
RTI Composite Score	.06	.03	.15	1.79	.076

Research Question 2: Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the disciplinary weighted risk ratio?

Standard multiple linear regression analysis was performed to answer this research question. Gender and race were nominal (dichotomous) variables while RTI Composite Scores were on the interval level. For tenure as a special education director in the current school district and total number of years of experience in education, dummy coding was used. In each case the lowest level of experience was used as the reference category with dummy variables created for the two higher levels of experience. For tenure as a Special Education Director, directors with 1 to 5 years of experience was the reference category and the two dummy variables were directors having 6 to 10 years of experience and 11 or more years of experience. For years in public education, directors with 1 to 15 years of experience was the reference category and the two dummy variables were directors having between 16 and 25 years of experience and directors having 26 or more years of experience.

Assumptions related to normality, homoscedasticity, multicollinearity, and outliers were examined. Normality was examined by creating a histogram of the disciplinary weighted risk ratio which showed approximate normality. Homoscedasticity was examined by constructing scatterplots of standardized predicted values (x-axis) and standardized residuals (y-axis) to determine if there are larger residuals at certain values of the predicted scores (which would indicate a violation of the homoscedasticity assumption). The scatterplot showed approximate homoscedasticity. Multicollinearity was assessed by examining the correlations among the independent variables. As shown

in Table 5, none of the correlations reached the level that would indicate problems associated with multicollinearity. In addition, variance inflation factor (VIF) and tolerance statistics were examined. As would be expected given the low correlations among the independent variables, no tolerance value was lower than .41 and no VIF statistic was greater than 2.42, again indicating that multicollinearity was not a problem for these independent variables. Both the bivariate correlation analyses (shown in Table 3) and the VIF and tolerance statistics indicated that multicollinearity was not a problem in this analysis. Casewise diagnostics indicated that standardized predicted values ranged from -1.86 to 2.27 indicating that no values were outside the range from -3.00 to +3.00 standard deviations from the mean. With outliers defined as scores with standardized values of three or more in absolute value, this indicates that there were no outliers. A critical value of 20.52, for 5 degrees of freedom because there were five predictor variables in the model, was used for the statistical significance test of the Mahalanobis distance measures for a p value of .001. Mahalanobis distance values ranged from 2.75 to 19.30 and none were statistically significant. Cook's distance measures ranged from .00 to .12. Values < 1 indicate no cause for concern of the overall influence of the case. Standardized dffit values ranged from -0.59 to 1.05.

Table 8 shows the results from the regression analysis for the second research question. The R^2 coefficient of .09 indicated that 9% of the variance in disciplinary weighted risk ratios was explained by the independent variables, but this was not

statistically significant, $R = .30$, $R^2 = .09$, $R^2_{adj} = .04$, $F(7, 147) = 2.02$, $p = .057$.

Therefore, the answer to the second research question was that a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI were not significant predictors of the disciplinary weighted risk ratio.

Table 8

Results of Regressing the Disciplinary Weighted Risk Ratio on the Independent Variables

Variable	B	Std. Error	β	t	p
Constant	2.96	.49		5.99	< .001
Gender	-.03	.31	-.01	-.11	.911
Race	-.37	.26	-.11	-1.40	.163
6 to 10 years as a Special Education Director in the current district	-.43	.27	-.14	-1.60	.112
11 or more years as a Special Education Director in the current district	-.40	.29	-.13	-1.38	.170
16 to 25 years employed in education	-.78	.30	-.29	-2.63	.010
26 or more years employed in education	-.68	.34	-.25	-2.03	.044

RTI Composite Score	.01	.02	.02	.27	.788
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Research Question 3: Is there a significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio?

Descriptive statistics for the identification risk ratio as a function of RTI and director's tenure are shown in Table 9. For the ANOVA, RTI scores were grouped as between 0 and 15 ($n = 53$, 34.2%), between 16 and 19 ($n = 29$, 18.7%), between 20 and 21 ($n = 37$, 23.9%), and 22 and over ($n = 36$, 23.2%). The range of identification risk ratios for directors with 1 to 5 years of tenure and RTI scores between 0 and 15 was 7.01 with a mean of 3.61 ($SD = 1.98$). The range of identification risk ratios for directors with 1 to 5 years of tenure and RTI scores between 16 and 19 was 8.34 with a mean of 3.47 ($SD = 2.16$). The range of identification risk ratios for directors with 1 to 5 years of tenure and RTI scores between 20 and 21 was 5.69 with a mean of 3.08 ($SD = 1.43$). The range of identification risk ratios for directors with 1 to 5 years of experience and RTI scores between 22 and 29 was 11.68 with a mean of 3.56 ($SD = 2.76$).

The range of identification risk ratios for directors with 6 to 10 years of tenure and RTI scores between 0 and 15 was 4.60 with a mean of 2.56 ($SD = 1.64$). The range of identification risk ratios for directors with 6 to 10 years of tenure and RTI scores between 16 and 19 was 4.14 with a mean of 3.27 ($SD = 1.22$). The range of

identification risk ratios for directors with 6 to 10 years of tenure and RTI scores between 20 and 21 was 5.07 with a mean of 3.42 ($SD = 1.66$). The range of identification risk ratios for directors with 6 to 10 years of experience and RTI scores between 22 and 29 was 4.19 with a mean of 3.86 ($SD = 1.73$).

The range of identification risk ratios for directors with 11 or more years of tenure and RTI scores between 0 and 15 was 5.30 with a mean of 2.60 ($SD = 1.47$). The range of identification risk ratios for directors with 11 or more years of tenure and RTI scores between 16 and 19 was 4.02 with a mean of 2.75 ($SD = 1.52$). The range of identification risk ratios for directors with 11 or more years of tenure and RTI scores between 20 and 21 was 8.67 with a mean of 3.20 ($SD = 2.65$). The range of identification risk ratios for directors with 11 or more years of experience and RTI scores between 22 and 29 was 6.28 with a mean of 3.76 ($SD = 2.32$).

Table 9

Descriptive Statistics for Identification Risk Ratios by Level of RTI and Level of Director's Tenure

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Variance	Skewness	Kurtosis
1 to 5 years of tenure						
RTI between 0 and 15	29	3.60	1.98	3.91	0.98	-0.10
RTI between 16 and 19	11	3.47	2.36	5.56	1.43	3.17
RTI between 20 and 21	18	3.08	1.43	2.03	1.46	2.16

RTI between 22 and 29	20	3.56	2.76	7.60	1.80	3.77
6 to 10 years of tenure						
RTI between 0 and 15	10	2.56	1.64	2.68	1.12	-0.35
RTI between 16 and 19	12	3.27	1.22	1.49	-0.35	-0.13
RTI between 20 and 21	8	3.42	1.66	2.76	1.82	3.49
RTI between 22 and 29	6	3.86	1.73	2.99	0.39	-1.56
11 or more years of tenure						
RTI between 0 and 15	14	2.60	1.47	2.16	-0.01	-0.41
RTI between 16 and 19	6	2.75	1.52	2.32	1.17	0.84
RTI between 20 and 21	11	3.20	2.65	7.03	0.87	0.57
RTI between 22 and 29	10	3.76	2.32	5.39	0.93	-0.55

There were no missing data. Z-scores were examined within each of the 12 groups, and in no case did any of the z-scores exceed 3.00 in absolute value indicating that there were no outliers. The assumptions required for a factorial ANOVA include normality and homogeneity of variance. Scores on the identification risk ratio are ratio level. The distribution of identification risk ratios was examined by constructing histograms, stem and leaf plots, Q-Q plots, and by computing skewness and kurtosis values.

Examination of the data revealed that the distribution of identification risk ratios had a slight positive skewness for all 12 subgroups shown in Table 10 with the exception of directors with between 5 and 10 years of tenure and RTI scores between 16 and 19 and

directors with 11 or more years of tenure and RTI scores between 0 and 15 (for whom there was slight negative skewness). Results of the Shapiro-Wilk (S-W) tests were statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 0 and 15, $SW(29) = 0.89, p = .004$, statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 16 and 19, $SW(11) = 0.86, p = .049$, statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 20 and 21, $SW(18) = 0.87, p = .015$, and statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 22 and 29, $SW(20) = 0.82, p = .002$.

The Shapiro-Wilk (S-W) tests were statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 0 and 15, $SW(10) = 0.80, p = .015$, not statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 16 and 19, $SW(12) = 0.94, p = .536$, statistically significant for Directors with between 5 and 10 years of tenure and RTI scores between 20 and 21, $SW(8) = 0.79, p = .023$, and not statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 22 and 29, $SW(6) = 0.91, p = .433$.

The Shapiro-Wilk (S-W) tests were not statistically significant for directors with 11 or more years of tenure and RTI scores between 0 and 15, $SW(14) = 0.98, p = .931$, not statistically significant for directors with 11 or more years of tenure and RTI scores between 16 and 19, $SW(6) = 0.89, p = .330$, not statistically significant for directors with

11 or more years of tenure and RTI scores between 20 and 21, $SW(11) = 0.93, p = .377$, and statistically significant for directors with 11 or more years of tenure and RTI scores between 22 and 29, $SW(10) = 0.83, p = .032$. Thus, the S-W tests were statistically significant (indicating nonnormality) for seven of the 12 subgroups shown in Table 7. The assumption of normality was met from the preponderance of the evidence across all of the different methods used to examine it. The assumption of homogeneity of variance was met as the Levene's test was not significant, $F(11, 143) = 0.95, p = .497$.

The results of the factorial ANOVA indicated that the interaction between the director's years of tenure and RTI group was not statistically significant, $F(6, 143) = 0.79, p = .786, \eta_p^2 = .02$. There was not a significant difference based on a director's years of tenure, $F(2, 143) = 0.38, p = .687, \eta_p^2 = .01$. There was no statistically significant difference between RTI groups, $F(3, 143) = 0.93, p = .426, \eta_p^2 = .02$. The small η_p^2 coefficients indicated low levels of practical significance. Figure 3 shows the similarity of identification risk ratios across the 12 groups examined in this factorial ANOVA (in the order in which the groups appear in Table 9). The answer to the third research question of this study was that there was no difference in identification weighted risk ratios based on levels of RTI or level of director's tenure.

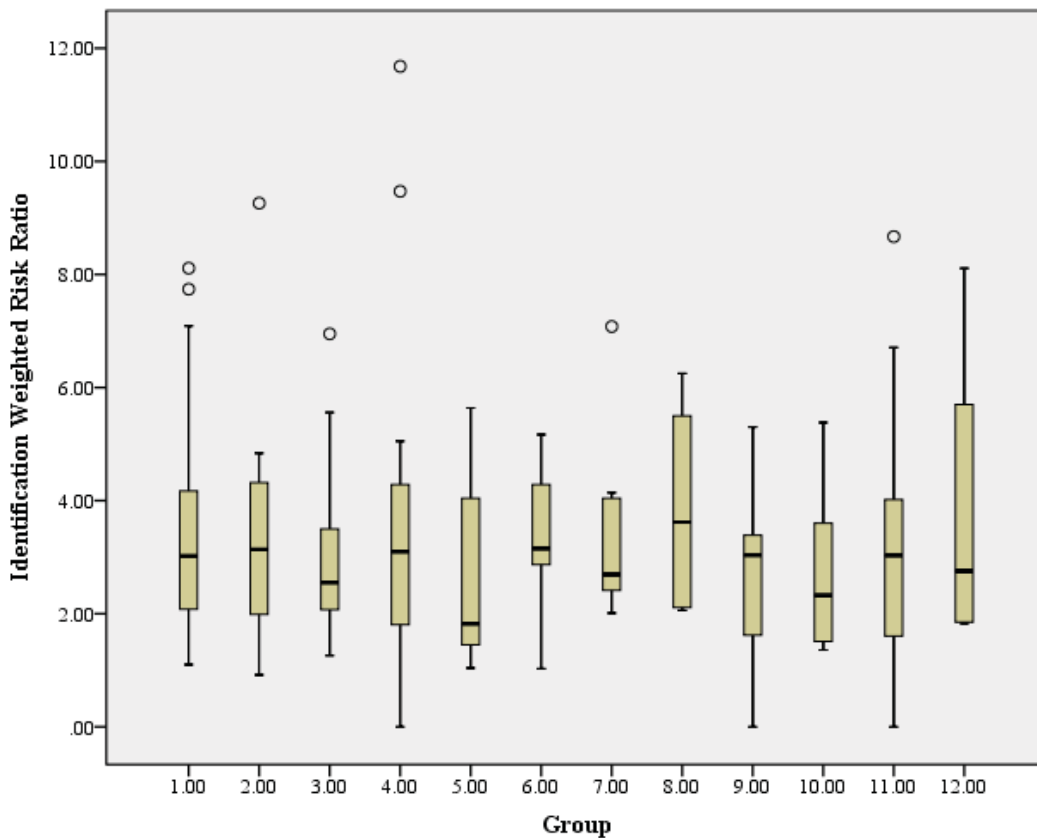


Figure 3. Comparison of Director’s Years of Tenure and RTI Groups on Identification Risk Ratios.

Research Question 4: Is there a significant difference between levels of RTI and levels of a director’s tenure on the disciplinary weighted risk ratio?

Table 10 shows descriptive statistics for the disciplinary risk ratio as a function of RTI and Director’s tenure. The same groupings on the independent variables were used as was the case for the third research question. Specifically, RTI scores were grouped as between 0 and 15 ($n = 53, 34.2\%$), between 16 and 19 ($n = 29, 18.7\%$), between 20 and 21 ($n = 37, 23.9\%$), and 22 and over ($n = 36, 23.2\%$). The range of disciplinary risk

ratios for directors with 1 to 5 years of tenure and RTI scores between 0 and 15 was 8.28 with a mean of 2.63 ($SD = 1.75$). The range of disciplinary risk ratios for directors with 1 to 5 years of tenure and RTI scores between 16 and 19 was 3.52 with a mean of 2.42 ($SD = 1.13$). The range of disciplinary risk ratios for directors with 1 to 5 years of tenure and RTI scores between 20 and 21 was 4.32 with a mean of 2.15 ($SD = 1.02$). The range of disciplinary risk ratios for directors with 1 to 5 years of experience and RTI scores between 22 and 29 was 6.56 with a mean of 2.36 ($SD = 1.41$).

The range of disciplinary risk ratios for directors with 6 to 10 years of tenure and RTI scores between 0 and 15 was 3.28 with a mean of 2.14 ($SD = 0.98$). The range of disciplinary risk ratios for directors with 6 to 10 years of tenure and RTI scores between 16 and 19 was 6.25 with a mean of 2.13 ($SD = 1.54$). The range of disciplinary risk ratios for Directors with 6 to 10 years of tenure and RTI scores between 20 and 21 was 1.27 with a mean of 1.76 ($SD = 0.43$). The range of disciplinary risk ratios for directors with 6 to 10 years of experience and RTI scores between 22 and 29 was 2.08 with a mean of 1.43 ($SD = 0.76$).

The range of disciplinary risk ratios for directors with 11 or more years of tenure and RTI scores between 0 and 15 was 4.13 with a mean of 1.75 ($SD = 1.06$). The range of disciplinary risk ratios for directors with 11 or more years of tenure and RTI scores between 16 and 19 was 1.21 with a mean of 2.16 ($SD = 0.46$). The range of disciplinary risk ratios for directors with 11 or more years of tenure and RTI scores between 20 and

21 was 2.68 with a mean of 1.63 ($SD = 1.01$). The range of disciplinary risk ratios for directors with 11 or more years of experience and RTI scores between 22 and 29 was 7.19 with a mean of 2.20 ($SD = 1.98$).

Table 10

Descriptive Statistics for Disciplinary Risk Ratios by RTI and Director's Tenure

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Variance	Skewness	Kurtosis
1 to 5 years of tenure						
RTI between 0 and 15	29	2.63	1.75	3.06	1.75	3.71
RTI between 16 and 19	11	2.42	1.13	1.27	-1.25	0.97
RTI between 20 and 21	18	2.15	1.02	1.04	0.46	0.99
RTI between 22 and 29	20	2.36	1.41	1.98	1.23	3.88
6 to 10 years of tenure						
RTI between 0 and 15	10	2.14	0.98	0.97	0.63	0.72
RTI between 16 and 19	12	2.13	1.54	2.37	1.77	4.74
RTI between 20 and 21	8	1.76	0.43	0.18	0.17	-0.48
RTI between 22 and 29	6	1.43	0.76	0.58	-1.70	2.93
11 or more years of tenure						
RTI between 0 and 15	14	1.75	1.06	1.13	0.28	1.20
RTI between 16 and 19	6	2.16	0.46	0.21	0.50	-0.73
RTI between 20 and 21	11	1.63	1.01	1.02	-0.77	-0.92
RTI between 22 and 29	10	2.20	1.98	3.94	1.97	4.80

There were no missing data for disciplinary risk ratios. Z-scores were examined within each of the 12 groups, and in only one case did any of the z-scores for disciplinary weighted risk ratios exceed 3.00 in absolute (with a value of 3.23) indicating that there

was only one small outlier. Scores on the identification risk ratio are ratio level. The assumptions required for a factorial ANOVA include normality and homogeneity of variance. The distribution of identification risk ratios was examined by constructing histograms, stem and leaf plots, Q-Q plots, and by computing skewness and kurtosis values.

Examination of the data revealed that the distribution of identification risk ratios had slight positive skewness for 9 subgroups shown in Table 10 and negative skewness for the remaining 3 subgroups. Similarly, positive kurtosis existed for 9 of the subgroups while negative kurtosis existed for the remaining 3 subgroups.

Results of the S-W tests were statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 0 and 15, $SW(29) = 0.84, p < .001$, not statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 16 and 19, $SW(11) = 0.86, p = .056$, not statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 20 and 21, $SW(18) = 0.93, p = .172$, and statistically significant for directors with between 1 and 5 years of tenure and RTI scores between 22 and 29, $SW(20) = 0.85, p = .005$.

The Shapiro-Wilk (S-W) tests were not statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 0 and 15, $SW(10) = 0.93, p = .409$, statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 16 and 19, $SW(12) = 0.84, p = .025$, not statistically significant for

directors with between 5 and 10 years of tenure and RTI scores between 20 and 21, $SW(8) = 0.95, p = .712$, and not statistically significant for directors with between 5 and 10 years of tenure and RTI scores between 22 and 29, $SW(6) = 0.83, p = .097$.

The Shapiro-Wilk (S-W) tests were not statistically significant for directors with 11 or more years of tenure and RTI scores between 0 and 15, $SW(14) = 0.95, p = .525$, not statistically significant for directors with 11 or more years of tenure and RTI scores between 16 and 19, $SW(6) = 0.93, p = .556$, not statistically significant for directors with 11 or more years of tenure and RTI scores between 20 and 21, $SW(11) = 0.86, p = .058$, and statistically significant for directors with 11 or more years of tenure and RTI scores between 22 and 29, $SW(10) = 0.81, p = .017$. Thus, the S-W tests were statistically significant (indicating nonnormality) for four of the 12 subgroups shown in Table 7. The assumption of normality was met from the preponderance of the evidence across all of the different methods used to examine it. The assumption of homogeneity of variance was met as the Levene's test was not significant, $F(11, 143) = 1.20, p = .292$.

The results of the factorial ANOVA indicated that the interaction between a director's years of tenure and RTI group was not statistically significant, $F(6, 143) = 0.39, p = .786, \eta_p^2 = .02$. There was not a significant difference based on director's years of tenure, $F(2, 143) = 2.35, p = .099, \eta_p^2 = .03$. There was no statistically significant difference between RTI groups, $F(3, 143) = 0.56, p = .642, \eta_p^2 = .01$. The small η_p^2 coefficients ranging from .01 to .03 indicated low levels of practical significance. Figure

4 shows the similarity of identification risk ratios across the 12 groups examined in this factorial ANOVA (with the groups presented in the same order in which the groups appeared in Table 10). Based on these results, the answer to the fourth research question was that there was no difference in disciplinary weighted risk ratios based on levels of RTI or levels of a director's experience.



Figure 4. Comparison of Director's Years of Tenure and RTI Groups on Disciplinary Risk Ratios.

Research Question 5: Is there a significant difference between levels of RTI and levels of a director's experience on the identification weighted risk ratio?

Table 11 contains descriptive statistics for the identification risk ratio as a function of RTI and director's experience. For the ANOVA, RTI scores were grouped as for the prior research questions as between 0 and 15 ($n = 53$, 34.2%), between 16 and 19 ($n = 29$, 18.7%), between 20 and 21 ($n = 37$, 23.9%), and 22 and over ($n = 36$, 23.2%). The director's years of experience was grouped as between 1 and 15 years ($n = 31$, 20.0%), between 16 and 25 years of experience ($n = 67$, 43.2%), and 26 or more years of experience ($n = 57$, 36.8%). The range of identification risk ratios for directors with 1 to 15 years of experience and RTI scores between 0 and 15 was 7.07 with a mean of 3.70 ($SD = 2.12$). The range of identification risk ratios for directors with 1 to 15 years of experience and RTI scores between 16 and 19 was 1.50 with a mean of 3.17 ($SD = 0.54$). The range of identification risk ratios for directors with 1 to 15 years of experience and RTI scores between 20 and 21 was 2.42 with a mean of 2.96 ($SD = 1.11$). The range of identification risk ratios for directors with 1 to 15 years of experience and RTI scores between 22 and 29 was 9.47 with a mean of 3.51 ($SD = 5.19$).

The range of identification risk ratios for directors with 16 to 25 years of experience and RTI scores between 0 and 15 was 5.69 with a mean of 2.95 ($SD = 1.63$). The range of identification risk ratios for directors with 16 to 25 years of experience and

RTI scores between 16 and 19 was 8.34 with a mean of 3.14 ($SD = 2.23$). The range of identification risk ratios for directors with 16 to 25 years of experience and RTI scores between 20 and 21 was 6.91 with a mean of 3.23 ($SD = 1.73$). The range of identification risk ratios for directors with 16 to 25 years of experience and RTI scores between 22 and 29 was 10.11 with a mean of 4.64 ($SD = 2.65$).

The range of identification risk ratios for directors with 26 or more years of experience and RTI scores between 0 and 15 was 6.30 with a mean of 2.75 ($SD = 1.67$). The range of identification risk ratios for directors with 26 or more years of experience and RTI scores between 16 and 19 was 3.87 with a mean of 3.48 ($SD = 1.41$). The range of identification risk ratios for directors with 26 or more years of experience and RTI scores between 20 and 21 was 8.67 with a mean of 3.20 ($SD = 2.24$). The range of identification risk ratios for directors with 26 or more years of experience and RTI scores between 22 and 29 was 4.60 with a mean of 2.88 ($SD = 1.35$).

Table 11

Descriptive Statistics for Identification Risk Ratios by Level of RTI and Level of Director's Experience

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Variance	Skewness	Kurtosis
1 to 15 years of experience						
RTI between 0 and 15	18	3.70	2.12	4.51	0.85	-0.11
RTI between 16 and 19	6	3.17	0.54	0.29	2.11	4.87

RTI between 20 and 21	4	2.96	1.11	1.23	0.79	-1.29
RTI between 22 and 29	3	3.51	5.19	26.92	1.65	-
16 to 25 years of experience						
RTI between 0 and 15	19	2.95	1.63	2.66	1.25	0.93
RTI between 16 and 19	15	3.14	2.23	4.98	1.43	2.96
RTI between 20 and 21	18	3.23	1.73	3.00	0.85	0.89
RTI between 22 and 29	15	4.64	2.65	7.02	1.47	2.50
26 or more years of experience						
RTI between 0 and 15	16	2.75	1.67	2.80	0.51	0.05
RTI between 16 and 19	8	3.48	1.41	1.98	0.06	-1.26
RTI between 20 and 21	15	3.20	2.24	5.00	1.26	1.81
RTI between 22 and 29	18	2.88	1.35	1.82	0.91	-0.08

Note. Kurtosis was not calculated for the group with between 1 and 15 years of experience and RTI scores between 22 and 29 because there were only three people in this group.

There were no missing data for identification risk ratios. Z-scores were examined within each of the 12 groups, and in no case did any of the z-scores exceed 3.00 in absolute value indicating that there were no outliers. The assumptions required for a factorial ANOVA include normality and homogeneity of variance. Scores on the identification risk ratio are ratio level. The distribution of identification risk ratios was examined by constructing histograms, stem and leaf plots, Q-Q plots, and by computing skewness and kurtosis values.

Examination of the data revealed that the distribution of identification risk ratios had a slight positive skewness for all 12 subgroups shown in Table 11. Positive kurtosis was found for seven groups and negative kurtosis was found for the remaining four groups. Results of the S-W tests were not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 0 and 15, $SW(18) = 0.92, p = .114$, statistically significant for directors with between 1 and 15 years of experience and RTI scores between 16 and 19, $SW(6) = 0.72, p = .010$, not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 20 and 21, $SW(4) = 0.92, p = .516$, and not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 22 and 29, $SW(3) = 0.83, p = .195$.

The S-W tests were statistically significant for directors with between 16 and 25 years of experience and RTI scores between 0 and 15, $SW(19) = 0.85, p = .006$, statistically significant for directors with between 16 and 25 years of experience and RTI scores between 16 and 19, $SW(15) = 0.84, p = .013$, statistically significant for directors with between 16 and 25 years of experience and RTI scores between 20 and 21, $SW(18) = 0.90, p = .047$, and statistically significant for directors with between 16 and 25 years of experience and RTI scores between 22 and 29, $SW(15) = 0.88, p = .043$.

The Shapiro-Wilk (S-W) tests were not statistically significant for directors with 26 or more years of experience and RTI scores between 0 and 15, $SW(16) = 0.98, p = .922$, not statistically significant for directors with 26 or more years of experience and

RTI scores between 16 and 19, $SW(8) = 0.96, p = .777$, not statistically significant for directors with 26 or more years of experience and RTI scores between 20 and 21, $SW(15) = 0.89, p = .076$, and statistically significant for directors with 26 or more years of experience and RTI scores between 22 and 29, $SW(18) = 0.88, p = .025$. Thus, the S-W tests were statistically significant (indicating nonnormality) for six of the 12 subgroups shown in Table 7. The assumption of normality was met from the preponderance of the evidence across all of the different methods used to examine it. The assumption of homogeneity of variance was not met as the Levene's test was statistically significant, $F(11, 143) = 2.37, p = .010$, indicating that the results from the ANOVA should be interpreted with caution.

The results of the factorial ANOVA indicated that the interaction between a director's years of experience and RTI group was not statistically significant, $F(6, 143) = 1.07, p = .385, \eta_p^2 = .04$. There was not a significant difference based on director's years of experience, $F(2, 143) = 0.63, p = .534, \eta_p^2 = .01$. There was no statistically significant difference between RTI groups, $F(3, 143) = 0.40, p = .753, \eta_p^2 = .01$. The small η_p^2 coefficients between .01 and .04 indicated low levels of practical significance. Figure 5 shows the similarity of identification risk ratios across the 12 groups examined in this factorial ANOVA (in the order in which the groups appear in Table 9). Based on these results, the answer to the fifth research question was that there were no differences in

identification weighted risk ratios based on levels of RTI or levels of a director's experience.



Figure 5. Comparison of Director's Years of Experience and RTI Groups on Identification Risk Ratios.

Research Question 6: Is there a significant difference between levels of RTI and levels of a director's experience on the disciplinary weighted risk ratio?

Descriptive statistics for the disciplinary risk ratio as a function of RTI and a director's experience are shown in Table 12. For the ANOVA, RTI scores were grouped as for the prior research questions as between 0 and 15 ($n = 53, 34.2\%$), between 16 and

19 ($n = 29$, 18.7%), between 20 and 21 ($n = 37$, 23.9%), and 22 and over ($n = 36$, 23.2%). A director's years of experience was grouped as between 1 and 15 years ($n = 31$, 20.0%), between 16 and 25 years of experience ($n = 67$, 43.2%), and 26 or more years of experience ($n = 57$, 36.8%) as for the prior research question. The range of disciplinary risk ratios for directors with 1 to 15 years of experience and RTI scores between 0 and 15 was 8.28 with a mean of 3.02 ($SD = 2.10$). The range of disciplinary risk ratios for directors with 1 to 15 years of experience and RTI scores between 16 and 19 was 1.29 with a mean of 2.57 ($SD = 0.50$). The range of disciplinary risk ratios for directors with 1 to 15 years of experience and RTI scores between 20 and 21 was 2.59 with a mean of 3.20 ($SD = 1.17$). The range of disciplinary risk ratios for directors with 1 to 15 years of experience and RTI scores between 22 and 29 was 2.78 with a mean of 1.48 ($SD = 1.40$).

The range of disciplinary risk ratios for directors with 16 to 25 years of experience and RTI scores between 0 and 15 was 3.03 with a mean of 2.05 ($SD = 0.83$). The range of disciplinary risk ratios for directors with 16 to 25 years of experience and RTI scores between 16 and 19 was 3.52 with a mean of 1.93 ($SD = 1.15$). The range of disciplinary risk ratios for directors with 16 to 25 years of experience and RTI scores between 20 and 21 was 2.47 with a mean of 1.72 ($SD = 0.58$). The range of disciplinary risk ratios for directors with 16 to 25 years of experience and RTI scores between 22 and 29 was 6.56 with a mean of 2.40 ($SD = 1.64$).

The range of disciplinary risk ratios for directors with 26 or more years of experience and RTI scores between 0 and 15 was 4.13 with a mean of 1.81 ($SD = 0.99$). The range of disciplinary risk ratios for directors with 26 or more years of experience and RTI scores between 16 and 19 was 5.30 with a mean of 2.63 ($SD = 1.59$). The range of disciplinary risk ratios for directors with 26 or more years of experience and RTI scores between 20 and 21 was 3.54 with a mean of 1.80 ($SD = 0.99$). The range of disciplinary risk ratios for directors with 26 or more years of experience and RTI scores between 22 and 29 was 7.19 with a mean of 2.08 ($SD = 1.46$).

Table 12

Descriptive Statistics for Disciplinary Risk Ratios by Level of RTI and Level of Director's Experience

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Variance	Skewness	Kurtosis
1 to 15 years of experience						
RTI between 0 and 15	18	3.02	2.10	4.42	1.19	1.37
RTI between 16 and 19	6	2.57	0.50	0.25	-0.22	-1.04
RTI between 20 and 21	4	3.20	1.17	1.38	-0.57	-1.20
RTI between 22 and 29	3	1.48	1.40	1.96	-0.57	-
16 to 25 years of experience						
RTI between 0 and 15	19	2.05	0.83	0.69	0.55	-0.10
RTI between 16 and 19	15	1.93	1.15	1.32	-0.16	-0.73
RTI between 20 and 21	18	1.72	0.58	0.33	-1.48	3.66
RTI between 22 and 29	15	2.40	1.64	2.68	1.05	2.26
26 or more years of experience						
RTI between 0 and 15	16	1.81	0.99	0.99	0.13	1.57
RTI between 16 and 19	8	2.63	1.586	2.49	2.03	5.14
RTI between 20 and 21	15	1.80	0.99	0.99	-0.53	-0.01
RTI between 22 and 29	18	2.08	1.46	2.12	2.61	9.48

Note. Kurtosis was not calculated for the group with between 1 and 15 years of experience and RTI scores between 22 and 29 because there were only three people in this group.

There were no missing data. Z-scores were examined within each of the 12 groups, and in only one case was a z-score greater than 3.00 (with a value of 3.51) indicating that there was not a larger number of outliers in the data. The assumptions required for a factorial ANOVA include normality and homogeneity of variance. Scores on the disciplinary risk ratio are ratio level. The distribution of disciplinary risk ratios was examined by constructing histograms, stem and leaf plots, Q-Q plots, and by computing skewness and kurtosis values.

Examination of the data revealed that the distribution of disciplinary risk ratios had positive skewness for in six subgroups and negative skewness in six subgroups. Positive kurtosis was found for six subgroups groups and negative kurtosis was found for the remaining five groups. Results of the S-W tests were not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 0 and 15, $SW(18) = 0.91, p = .070$, not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 16 and 19, $SW(6) = 0.88, p = .273$, not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 20 and 21, $SW(4) = 0.94, p = .659$, and not statistically significant for directors with between 1 and 15 years of experience and RTI scores between 22 and 29, $SW(3) = 0.99, p = .787$.

The S-W tests were not statistically significant for directors with between 16 and 25 years of experience and RTI scores between 0 and 15, $SW(19) = 0.97, p = .671$, not

statistically significant for directors with between 16 and 25 years of experience and RTI scores between 16 and 19, $SW(15) = 0.93, p = .256$, statistically significant for directors with between 16 and 25 years of experience and RTI scores between 20 and 21, $SW(18) = 0.88, p = .029$, and not statistically significant for directors with between 16 and 25 years of experience and RTI scores between 22 and 29, $SW(15) = 0.90, p = .094$.

The Shapiro-Wilk (S-W) tests were not statistically significant for directors with 26 or more years of experience and RTI scores between 0 and 15, $SW(16) = 0.93, p = .256$, statistically significant for directors with 26 or more years of experience and RTI scores between 16 and 19, $SW(8) = 0.78, p = .015$, not statistically significant for Directors with 26 or more years of experience and RTI scores between 20 and 21, $SW(15) = 0.94, p = .411$, and statistically significant for directors with 26 or more years of experience and RTI scores between 22 and 29, $SW(18) = 0.73, p < .001$. Thus, the S-W tests were statistically significant (indicating nonnormality) for three of the 12 subgroups shown in Table 6. The assumption of normality was met from the preponderance of the evidence across all of the different methods used to examine it. The assumption of homogeneity of variance was not met as the Levene's test was statistically significant, $F(11, 143) = 2.05, p = .027$, indicating that the results from the ANOVA should be interpreted with caution.

The results of the factorial ANOVA indicated that the interaction between a director's years of experience and RTI group was not statistically significant, $F(6, 143) =$

1.37, $p = .233$, $\eta_p^2 = .05$. There was no significant difference based on a director's years of experience, $F(2, 143) = 1.33$, $p = .269$, $\eta_p^2 = .02$. There was no statistically significant difference between RTI groups, $F(3, 143) = 0.35$, $p = .787$, $\eta_p^2 = .01$. The small η_p^2 coefficients between .01 and .05 indicated low levels of practical significance. Figure 6 shows the similarity of disciplinary risk ratios across the 12 groups examined in this factorial ANOVA (in the order in which the groups appear in Table 10). Therefore, the answer to the sixth research question was that there were no differences in disciplinary weighted risk ratios based on levels of RTI or levels of a director's experience.

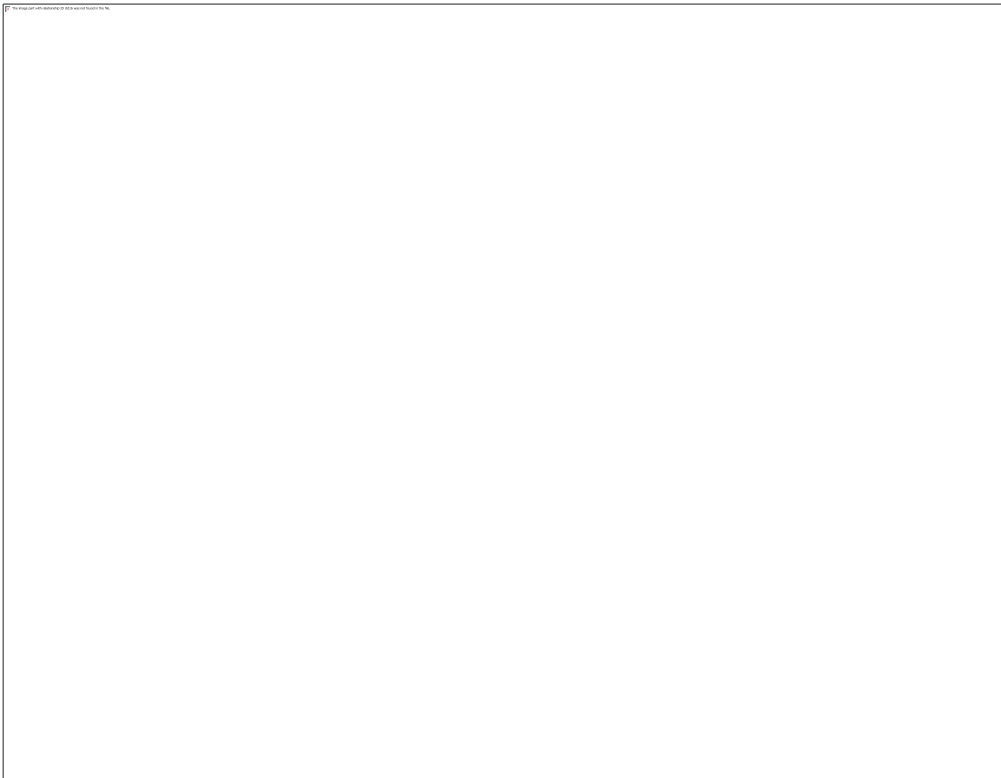


Figure 6. Comparison of Director's Years of Experience and RTI Groups on Disciplinary Risk Ratios.

Summary of Findings

The results from the analyses performed to answer the six research questions of this study were presented in this chapter. The primary conclusion from this study was that a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school districts' implementation of RTI were not significant predictors of either the disproportionality weighted risk ratio or the identification weighted risk ratio. Thus, although there was substantial variability in disproportionality weighted risk ratios and identification weighted risk ratios from district to district, this variability does not appear to be related to the characteristics of the district's Special Education Director or to the implementation of RTI. In the next chapter the conclusions are discussed in the context of past research and recommendations are offered for future research and educational practice.

Chapter V

SUMMARY AND DISCUSSION

This chapter contains a discussion of the results from this study. Initially, an overview of the study is presented, and the existing literature in this area is summarized. Then, the methods, participants, variables, and procedures used in the current study are reviewed. The findings from this study are then summarized and discussed, and the limitations are described. Finally, recommendations for future research are presented and conclusions are drawn.

Overview of the Study

Sullivan and Artiles (2011) guided the theoretical framework for this study. The researchers identified and proposed the structural inequity theory. This theory directly relates to disproportionality due to the inequity of various ethnic and racial groups over identified for special education services.

According to Monroe (2005), black students are more than three times likely to be suspended than their white counterparts. Moreover, educators tend to reprimand black students even when youths of other races are engaging in same or similar behavior. Thus, punitive consequences are inevitable.

Also, African American students demonstrate a significant gap in achievement, graduation rates, identification for special education services, and discipline infractions than the data indicates for white students (Skiba et al., 2008). Current practices and beliefs are often not challenged to consider cross-cultural understanding (Monroe, 2006). Because disproportionality is such a multidimensional issue, much more research is needed, both qualitative and quantitative, to continue to develop appropriate, researched-based interventions. Moreover, continuing with the unchallenged social norms in schools will continue to provide the bleak expectations and opportunities for African American students.

This study served to investigate several potential predictor variables that may have an impact on discipline and identification disproportionality in Georgia public schools. The primary purpose of this study was to investigate if special education directors' leadership role features such as tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI impact district disproportionality for minority students in Georgia. The secondary purpose of this study was to establish the relationship, if any, of implementation of RTI with special education directors' tenure and experience.

In the course of conducting this research, it was very apparent that there was very little research on any variables of special education director that may have an influence

on disproportionality. Therefore, it is essential that research continues to evolve to more appropriately provide better opportunities for all students.

Methods

A quantitative, nonexperimental research design was used in this study (Vogt, 2006). This research design was most appropriate because the independent variables in this study were preexisting characteristics of the participants rather than variables that could have been experimentally manipulated, and random assignment to groups was not possible. Data were analyzed with the SPSS computer program (version 20.0). After an examination of the statistical assumptions, the main analysis consisted of multiple regression analyses to examine the combined effects of tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI on the weighted risk ratios, as well as ANOVAs used to examine interaction effects.

Participants

The target population was the 180 Special Education Program Directors in the State of Georgia during the 2014-2015 school year. All of these individuals were invited to participate but not all did so. One hundred and fifty five of the 180 special education directors, 86%, completed the demographic survey.

Variables Studied

There were five independent variables in this study. The independent variables were (a) tenure as special education program director, (b) gender, (c) years of experience in education, (d) race or ethnicity, and (e) level of implementation of RTI which was measured using a brief survey. Two dependent variables were examined in this study. The first dependent variable was the identification weighted risk ratio which was computed based on the percentage of minority students in special education compared to the percentage of white students in special education. The second dependent variable was the disciplinary weighted risk ratio which was computed as the percentage of minority students in special education among students who were suspended or expelled compared to the percentage of white students in special education who were suspended or expelled.

Procedures

Permission to conduct this study was obtained from the Institutional Review Board of Valdosta State University, and this study was given approval by the GADOE Director of Special Education. The data for this study came from (a) a brief survey and (b) archival data obtained from the GADOE website. The archival data were collected for all 180 school districts in Georgia. The initial survey of special education directors through a Survey Monkey survey yielded no results, as there were no responders via this data collection. At the fall 2014 G-CASE meeting, the survey was disseminated to all

special education directors who were in attendance at the opening session and who were willing to participate in the survey. The first page of the survey described the purpose, procedures, and consent for the study. The participants viewed the informed consent statement shown in Appendix A and gave their consent. Then, they were directed to the second page of the survey which contained questions regarding the school district in which they were the special education director, the number of years they have held that position, the number of years employed in the education field in any capacity, gender, and race or ethnicity, as well as the items related to RTI. The responses to the first survey question were used to link each special education director to the district-level data on disproportionality. A total of 56 surveys were returned for analysis. Due to the low return rate, a second data collection was done by calling districts that did not complete the survey at the G-CASE conference. An additional 99 surveys were completed for a total of 155 (86%). Data were analyzed using linear multiple regression for the first two research questions and ANOVAs for the last four research questions.

Summary of Findings

The first research question of this study was: Are a special education directors' gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the identification weighted risk ratio? The answer to this question was that a special education director's gender, tenure as a

special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI were not significant predictors of the disproportionality weighted risk ratio. The second research question was: Are a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in special education, race or ethnicity, or the school district's implementation of RTI significant predictors of the disciplinary weighted risk ratio? The answer was that a special education director's gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI were not significant predictors of the disciplinary weighted risk ratio.

The third research question was: Is there a significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio? The results showed that there was no difference in identification weighted risk ratios based on levels of RTI or level of director's tenure. The fourth research question was: Is there a significant difference between levels of RTI and levels of a director's tenure on the disciplinary weighted risk ratio? The results showed that there was no difference in disciplinary weighted risk ratios based on levels of RTI or levels of a director's experience.

The fifth research question was: Is there a significant difference between levels of RTI and levels of a director's experience on the identification weighted risk ratio? The results showed that there were no differences in identification weighted risk ratios based on levels of RTI or levels of a director's experience. The sixth and final research question was: Is there a significant difference between levels of RTI and levels of a director's experience on the disciplinary weighted risk ratio? The results showed that there were no differences in disciplinary weighted risk ratios based on levels of RTI or levels of a director's experience. In the following sections, these results are discussed and recommendations are offered for educational practice and future research in this area.

Based on the results from the analyses performed for the six individual research questions of this study, one primary conclusion was drawn: A special education director's gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI were not significant predictors of either the disproportionality weighted risk ratio or the identification weighted risk ratio.

There was substantial variation in both of the weighted risk ratios indicating that the identification of African American students as needing special education services and the disciplinary approach taken for these African American students varied between districts. However, this does not appear to be related to the demographic and background characteristics of the special education director in each district nor to the level of RTI

implementation. The reasons for the variation in the weighted risk ratios from district to district are unclear and will require further research as discussed below.

Discussion of Findings

The current and previous research certainly demonstrates inequity remains an issue for public education (Artiles et al., 2010; Artiles & Sullivan, 2011; Blanchett, 2009; Redfield & Kraft, 2012). However, across the literature, it is clear there is no easy answer or quick solution. This purpose of this study was to determine the predictive value of special education directors' tenure, experience, race and ethnicity, gender, and level of RTI implementation on discipline and identification disproportionality.

From the results of this survey, I was able to determine that none of the independent variables; gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity, or the school district's implementation of RTI; to be significant predictors of the disproportionality weighted risk ratio for discipline or identification. Moreover, there is no significant difference between levels of RTI and levels of a director's tenure on the identification weighted risk ratio or discipline ratio. Finally, I found no significant difference in the director's experience and implementation of RTI.

Unfortunately, after extensive exploration, there was no research found relating to directors and any of the predictive variables. Previous research that is related to this study were for other leadership positions such as principal's and superintendent's

experience and gender as related to outcomes such as achievement, graduation rate, and drop-out rates. For example, a researchers in Texas conducted a study and found that effective principals who have 3 or more years of experience have higher achievement rates than principals with less than 3 years of experience. The data from this study suggested that highly effective principals raise student achievement 2 to 7 months whereas less effective principals demonstrated less achievement gains during the school year (Branch, Hanushek, & Rivin, 2013). Much the same, superintendents who have at least 3 years of experience, participate in professional development, and recognize student improvement strategies tend to have higher achieving schools (Killion & Lanzerotte, 1992).

The theoretical framework for the current study was structural inequity theory (Sullivan & Artiles, 2011). According to structural inequity theory, disproportionality in the representation of various ethnic and racial groups in the special education system could be explained through racial inequity in social systems rather than as a function of the race-related beliefs of individuals (Conyers, 2002). That is, if structural equity theory was sufficient to explain disproportionality, then the characteristics of individuals in decision-making positions would not have strong effects on differences in disproportionality from school district to school district. This is because the social system of education is largely consistent from one school district to the next and therefore

individuals in decision-making positions would have less effect on disproportionality than the educational system as a whole.

In the current study, the special education directors within each district were the decision makers of interest. As a test of structural equity theory, the effects that the demographic and background characteristics of these individuals could have on district-level differences in disproportionality were examined. As noted above, the results from this study indicated that the gender, tenure as a special education director in the current school district, total number of years of experience in education, race or ethnicity were not related to disproportionality. This was true regardless of which measure of disproportionality is considered.

The conclusion from this study as related to structural equity theory, therefore, is that the theory was supported. Due to the fact that none of the demographic or background variables of the special education directors were predictive of either of the two measures of disproportionality, it appears that structural influences rather than individuals' race-related views may be the dominant factor in determining disproportionality. Through the examination of the potential relationships between special education teachers' demographic and background factors and disproportional representation of minority students in special education, structural inequity theory was tested and ultimately supported in this study.

Recommendations for educational practice based on research on leadership stability, retention, and experience of other leadership positions would be for districts to “groom from within” when possible to have a seamless transition for special education directors (Kouze & Posner, 2007). An effective teacher/leader who is already a part of the organization would likely not feel the level of stress as a new person who may have no experience and is not familiar with the system’s practices and procedures. Moreover, districts should promote capacity building to retain effective special education directors to ensure success for students. Leaders who are in their positions after 3-5 years are much more likely to make positive changes for the organization (Branch, Hanushek, & Rivkin, 2013). Based on the low percentage of minority directors in Georgia, more efforts should be made to recruit minority leaders and to provide culturally related professional learning to current leadership. The same can be said for gender. This study demonstrated less than 15% of directors in Georgia are males.

Limitations of the Study

There were several limitations and delimitations in this study. The first limitation was that only a selected group of independent variables were included. Specifically, only the demographic and background characteristics of the special education director and the level of RTI in the district served as independent variables in this study. There are undoubtedly a larger number of variables that could have an effect on district-to-district

variation in the weighted risk ratios examined in this study, but due to the focus of the current study, only a small number of these potential predictors were examined.

The second limitation of this study was that a nonexperimental research design was employed. This was necessary in that independent variables in this study could not be experimentally manipulated. This was the case because the independent variables in this study were pre-existing characteristics of the special education directors or of the district. Nevertheless, the lack of experimental manipulation of these variables means that no causal conclusions could be drawn in this study. However, this limitation had a small impact on the current study because none of the independent variables were found to be related to the dependent variables and therefore no potentially tenuous links between the independent and dependent variables were drawn.

The primary delimitation of this study was that only Special Education Directors within the State of Georgia were included. This means that the results from this study apply strictly to education in this state. It may be that different results would be obtained in other states, or it may be that the same results would be found. In either case, future research will be required before the generalizability of the findings from the current study can be determined.

Recommendations for Future Research

Based on the methodology, procedures, and results from this study, four recommendations for future research evolved. First, as noted above the proposed study

was conducted solely in the State of Georgia, meaning the generalizability of the current findings to special education programs in other states is unknown. Therefore, it is recommended that the current study should be replicated either on a national scale or in additional states to determine whether or not a school district's disproportionality varies as a function of the demographic and background characteristics of the special education director for the district or on the level of RTI.

The second recommendation for future research is more comprehensive models of disproportionality should be developed. In the current study, the only variables used as independent variables were the demographic and background characteristics of the participants and the level of RTI. Although this was consistent with the purpose of this study, it does mean that many other potentially relevant predictors were not included in this study. If researchers wish to develop a comprehensive model of disproportionality, they will need to include a broader range of independent variables.

The third recommendation for future research is that qualitative research studies should be performed in which special education directors would be interviewed regarding their perceptions and opinions about both the identification and disciplinary disproportionality that exists from district to district. The results from the current quantitative study showed that the specific demographic and background characteristics of the participants were not related to the extent to which disproportionality (in terms of either identification of discipline) existed in the district, but nevertheless there was

variability from district to district. It would be helpful to get stakeholder opinions regarding why such variability existed, and special education directors within each district (in addition to other individuals) are in a position to provide relevant opinions regarding this issue.

The fourth recommendation for future research is reporting RTI on a district level is very difficult due to implementation of fidelity by district, grade, and school. Most educators would agree that RTI is not where it needs to be, most especially in middle and high schools. Therefore, for better validity and reliability, both qualitative and quantitative data should be collected differently. Collecting data from elementary grades (K-5) and secondary (6-12) and comparing them separately may yield more valid and significant results.

Finally, professional learning for all persons in special education and leadership roles should be done on an on-going basis. It appears that persons who deal with special education issues are not usually aware of the federal laws that govern policy, practice, and procedures. Moreover, because the field of special education is ever changing and staff are changing, professional learning should be a part of the on-going professional learning by the school district.

Conclusions

Although there were no significant findings in this study, there is still important information to inform future research. A mixed-method replication or qualitative study

of the predictive variables in this study would likely provide more informative data and provide more insight to guide educational practices and procedures.

Disproportionality and inequity in education have been evident in public education for many years. Despite the extensive research, the problem still remains today. Although some data suggest that education is moving in a positive direction, we are far from equity in public education. Each state is different and has different populations and issues. Therefore, it is vital that both state and national studies continue to provide positive direction to providing an equitable education for all students.

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APPENDIX A:
 Survey
**Special Education Directors’
 Characteristics, Response to Intervention, and Disproportionality
 Survey**

Purpose: The purpose of this study is to examine Special Education directors’ leadership role characteristics such as tenure as special education program director, gender, years of experience in education, race or ethnicity, and level of implementation of RTI to determine how those factors impact district disproportionality for minority students in Georgia.

Consent: Your submission of this survey indicates your consent for participation. All responses will be kept strictly confidential.

Directions: Questions 1 – 5 “RTI”, please darken the numeral in each column that best represents your degree of agreement with each statement. On a scale of 1 to 6:

1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree

Response-to-Intervention (RTI)							
		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	Response to Intervention is completely implemented in your school district.	(1)	(2)	(3)	(4)	(5)	(6)
2	Response to Intervention is completely monitored in your school district.	(1)	(2)	(3)	(4)	(5)	(6)
3	Teachers in your district are completely committed to the RTI model in your district.	(1)	(2)	(3)	(4)	(5)	(6)
4	Support staff is completely committed to the RTI model in your district.	(1)	(2)	(3)	(4)	(5)	(6)

5	Principals are completely committed to the RTI model in your district.	(1)	(2)	(3)	(4)	(5)	(6)
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Special Education Directors'
 Characteristics, Response to Intervention, and Disproportionality
 Survey

Directions: Questions 1 – 6 “Demographic Information” (Mark all that apply).

Demographic Information	
1	In which school district are you employed? _____
2	What is your gender?
<input type="checkbox"/>	Male
<input type="checkbox"/>	Female
3	How long have you been a Special Education Director in your current district?
<input type="checkbox"/>	1 – 5 years
<input type="checkbox"/>	5 - 10 years
<input type="checkbox"/>	10 – 15 years
<input type="checkbox"/>	15 – 20 years
<input type="checkbox"/>	20 – 25 years
<input type="checkbox"/>	25 – 30 years
<input type="checkbox"/>	30+ years
4	How long have you been employed in education?
<input type="checkbox"/>	1 – 5 years
<input type="checkbox"/>	5 - 10 years
<input type="checkbox"/>	10 – 15 years
<input type="checkbox"/>	15 – 20 years
<input type="checkbox"/>	20 – 25 years
<input type="checkbox"/>	25 – 30 years
<input type="checkbox"/>	30+ years

5	What is your race?
<input type="checkbox"/>	American Indian or Alaska Native
<input type="checkbox"/>	Asian
<input type="checkbox"/>	Black or African American
<input type="checkbox"/>	Native Hawaiian or Other Pacific Islander
<input type="checkbox"/>	White
6	What is your ethnicity?
<input type="checkbox"/>	Hispanic or Latino
<input type="checkbox"/>	Non-Hispanic or Latino

Appendix B
Institutional Review Board Exemption



Appendix B

Institutional Review Board

Valdosta State University